

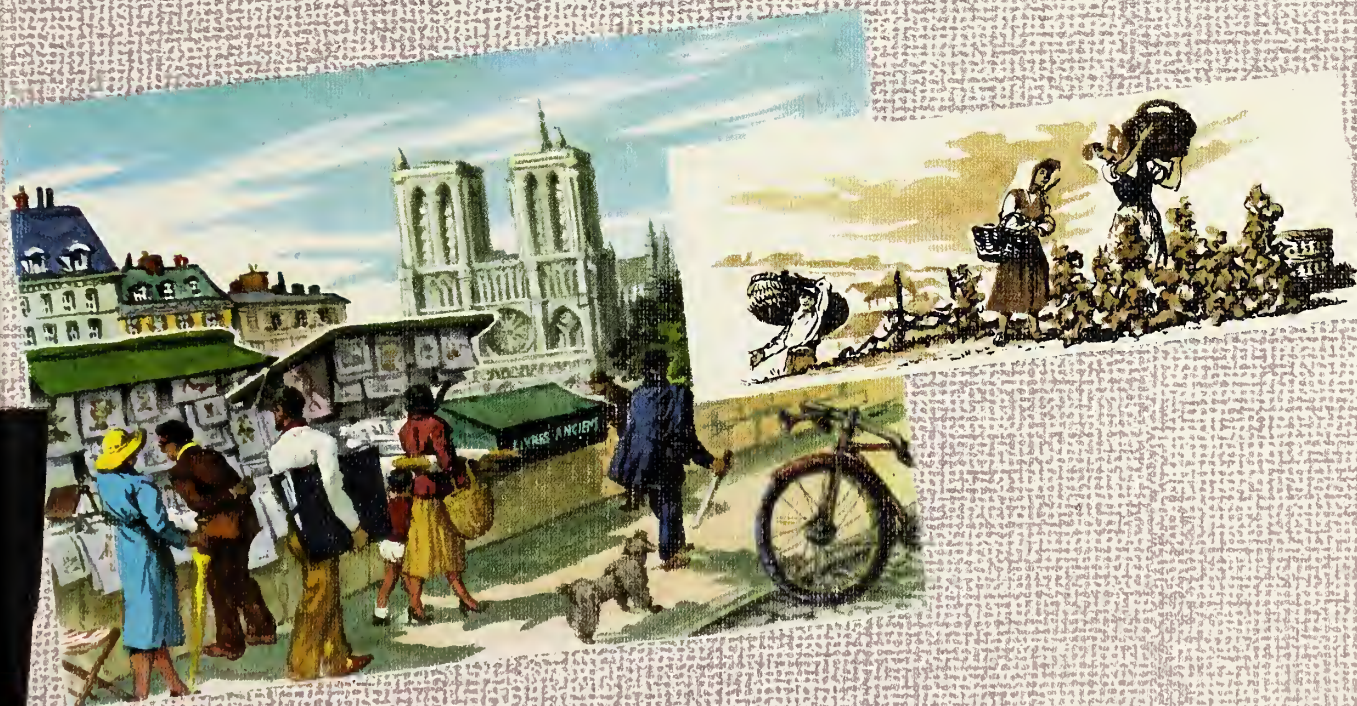
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OLD WORLD LANDS



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OLD WORLD LANDS

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HARLAN H. BARROWS

EDITH PUTNAM PARKER

CLARENCE WOODROW SORENSEN

W. J. GAGE AND COMPANY LIMITED

TORONTO

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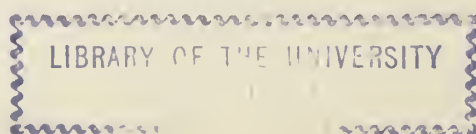
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BOUND IN CANADA

1960



PREFACE

OLD WORLD LANDS deals, as its name implies, with the peoples and countries of Europe, Asia, Africa, and Australia. The materials of the book are organized in a way that should facilitate an understanding of conditions in the second half of the 20th century.

Pupils who study these books should acquire simple, but clear, understandings of how men live in different environments throughout the world. They should understand how the advantages and disadvantages of different areas for human occupation and use are related to such natural factors as land forms, climates, and resources. They should understand that the lives of the present generation are tied firmly to the past, that almost everywhere there have been significant changes in the ways of living, distinct periods in development, and important shifts in population, and that inheritances from the past profoundly affect the lives of men today. They should understand the nature of the major problems faced today by different peoples in different lands, peoples who are in various stages of cultural and technological advancement. They should understand the nature and significance of the broader relationships—economic, political, and social—now existing among nations.

The development of these understandings will stimulate growth in an ability to relate

facts to their causes, to think clearly, and to reach sound conclusions. This growth will help prepare young Canadians to participate later as useful citizens in the solution of many public problems.

This is a changing world. The decline of colonialism, the unrest of non-western peoples, renewed disputes over places of chronic tension, and the expansion of Russian Communism, are examples of changes utilized here to promote the understandings and abilities just noted.

The maps in this book were designed solely to serve the purposes of the text. They are not general reference maps.

The drawings and pictures are an integral part of the descriptions of peoples and places. They will help greatly to produce distinct and lifelike images in the minds of the pupils.

The authors are under obligation to many individuals and organizations for assistance. The contributions of Miss Pearl H. Middlebrook, Miss Beatrice Collins, Miss Alys F. Conkling, and Mr. Milo Winter are acknowledged with deep appreciation and special thanks.

HARLAN H. BARROWS

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Figure 1. Old World Lands on a globe



Figure 2. Herdsmen of the grasslands

THROUGH MANY CENTURIES

Four continents. There are four continents in the Old World. They are Europe, Asia, Africa, and Australia.

The globe on the opposite page is placed so that all of Europe and Asia, nearly all of Africa, and a bit of Australia are shown. A globe cannot be turned so that all parts of all four continents may be seen at once.

As the globe shows, Europe and Asia really form *one* land mass. This huge land mass is called Eurasia. It contains more than a third of all the land and five out of every six persons in the world. People usually think of Eurasia as *two* "continents," Europe and Asia. The boundary between them is marked on the globe.

Asia and Africa are joined by the narrow Isthmus of Suez. Africa is three times as large as Europe. Asia is much larger than Africa and Europe combined. Australia, smaller than Europe, is not tied by land to any other continent. It is an island—an island so large that it is called a continent.

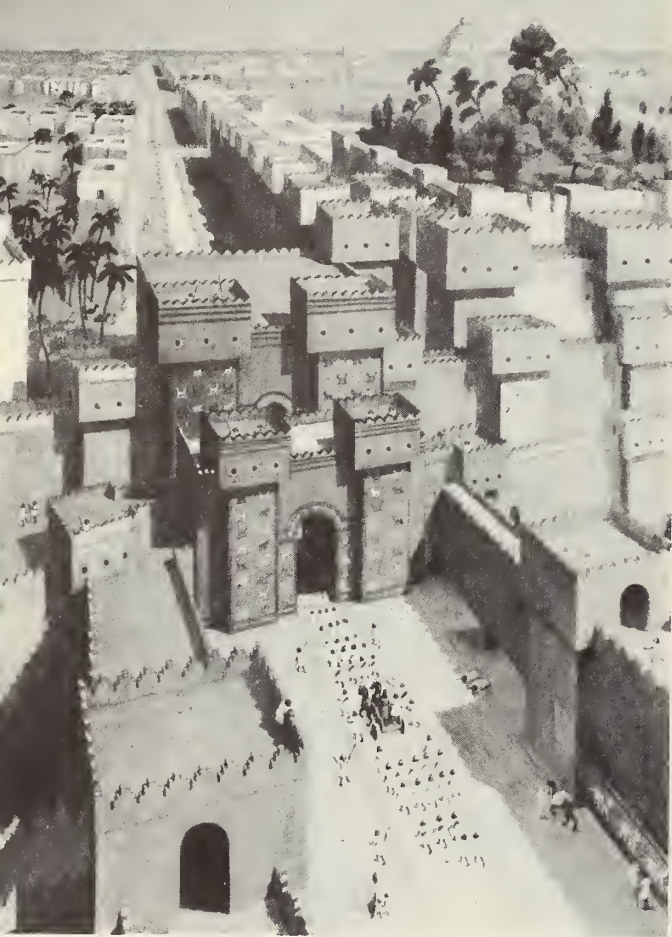
Around the Mediterranean

The great sea. A glance at the globe shows how nearly Europe, Asia, and Africa surround the Mediterranean Sea. At one place the outlet from the sea to the Atlantic Ocean, the Strait of Gibraltar, is only nine miles wide. This landlocked sea was the centre of the world known to white men in ancient times.

Mediterranean means "middle of the earth." The name was taken from the words *medius*, meaning middle, and *terra*, meaning earth. Clearly, the sea was well named.

Before civilization began. White men lived on every side of the Mediterranean for many thousands of years before civilization began. They had very little. They could not live even the simple kind of life, familiar today, that is suggested by Figure 2.

The earliest men had no tame animals, no tools, no weapons. They must have gathered wild fruits and roots and seeds for food.



Courtesy The Oriental Institute The University of Chicago
Figure 3. Babylon, in its days of glory

They killed small game with stones and clubs. They had to eat all their food raw.

After a very long time, men learned to make fire. Then they could cook their food. They could warm their bodies. They also learned to make stone tools and weapons, many of which have been found by modern men. Then they could get food with less trouble. They could defend themselves better.

Finally, men tamed wild cattle and sheep and other animals. Finally, too, they learned how to grow such wild grasses as wheat and barley, in order to get the seeds for food. After these two great events, human progress was faster. Civilized life became possible.

Two ways of life. Gradually two kinds of life developed that were very different. Some men lived as herders in the grasslands. There were vast areas of grassland, called *steppes*,

in southeastern Europe and in Asia. These were areas of light, uncertain rain, without trees in most places. The herdsmen raised cattle, sheep, and goats for milk and meat, for hides and wool. In time many of the herdsmen had horses and camels. They moved from one place to another with their herds and flocks to find enough grass. So they lived in easily-moved tents. They had no fixed homes.

Down through the centuries the roving people of the steppes have lived in much the same way. They live in that way today (Fig. 2). They are called *nomads*, which means wandering herdsmen.

Another sort of early men settled down in places where there was good soil to cultivate and water enough for crops to grow. They became farmers. More and more they used grain for food. They built fixed houses. In time, they built villages and even cities.

Many inventions and discoveries helped the people who led a settled life. They learned how to use copper and other metals. They developed the art of writing. Plows and wheeled-carts were invented. Trade grew up between different settlements and different regions. Many improvements were made, along many lines. The people who lived in fixed settlements made far greater progress than the nomads.

Trouble. Countless times there has been trouble between the nomads of the steppes and the farmers and townsmen of settled areas. The nomads depended, of course, on their herds and flocks. Many of their animals sometimes died from disease, or starved for want of grass when rain did not come. Then the nomads suffered. Hunger and want drove them to rob and plunder. Mounted on horses, perhaps, they made swift attacks, and as swiftly retreated with their booty. At times, large numbers of them invaded other lands. Time and again parts of eastern Europe, for example, have been plundered by hordes of horsemen from the steppes of Asia.

Desert traders. Some of the nomads settled in areas that they invaded. There they learned to carry goods from place to place. They became traders, and led caravans across the desert wastes.

In the Nile Valley. One of the cradles of civilization was along the lower Nile River (Fig. 1). The Nile had built up a strip of fertile black soil across the desert. Each year the lower river, swollen by summer rains far upstream, overflowed its banks. The flood waters soaked the land they covered, and left on it a thin layer of rich mud. In this way the river had made a fertile garden. It also kept the garden fertile. Water was taken from the river to irrigate part of the garden. Irrigation farming led to other things. The people who lived along the banks of the Nile made great progress in civilization.

Pictures that were carved on the walls of the tombs of Egyptian kings tell much about this ancient civilization. Farmers are shown planting and cultivating crops. Coppersmiths are hammering out tools. Goldsmiths are making jewelry. Potters are shaping jars from clay. Women are weaving linen cloth. Boatmen are carrying goods on the river. People are trading in market places.

These scenes and many others are in the pictures. With other records of progress, they show why Egypt is sometimes called "the mother of civilization." Useful knowledge of many kinds was taken from the Nile Valley to Europe, aiding civilization there.

Along the two rivers. The first cradle of civilization east of the Mediterranean, in Asia, was along the lower Euphrates and Tigris rivers (Fig. 1). Here there was a fertile delta, built by the two rivers. What rain there was fell in the mild winters. The hot summers were dry. Just as in Egypt, irrigation was necessary to grow wheat and barley. In both regions, fixed settlements and farming were made possible only by irrigation.

The farmers of the lower Euphrates-Tigris plain had neither wood nor stone with which



Courtesy The Oriental Institute, The University of Chicago

Figure 4. The ruins of Babylon

to build. But clay was everywhere about them. They made bricks of sun-baked clay, and used the bricks to build their houses. Their groups of brick houses grew into towns and cities. The greatest city of the lower plain was Babylon, on the banks of the Euphrates. The plain was called Babylonia, after the city.

The long story of ancient life in Babylonia resembles in many ways the story of early life on the Nile. But the Nile Valley had on either side a desert that gave it some protection. Babylonia was wide open to attack. It was bordered by an area that was grassland in winter, the rainy season, and desert the rest of the year. Babylonia was invaded often. Babylon was once destroyed completely.

Figure 3 shows how part of Babylon is thought to have looked when the city was one of the wonders of the world. Figure 4 shows the crumbled ruins of the city. Long



EURASIA

Miles
0 200 400 600 800

SYMBOLS FOR CITIES

- More than 1,000,000
- 500,000 to 1,000,000
- Other Selected Cities
- ⊙ Capitals
- Principal Railroads
- - - Canals

ELEVATION IN FEET

- More than 10,000
- 5,000 to 10,000
- 2,000 to 5,000
- 1,000 to 2,000
- 500 to 1,000
- Sea Level to 500
- Below Sea Level



and careful digging in the ruins uncovered little more than fragments of brick walls.

As the map in Figure 5 shows, the Euphrates and Tigris rivers are in a lowland, somewhat like a trough, that stretches across southwestern Asia from the Persian Gulf almost to the Mediterranean. Babylonia was at the southern end of the trough. This trough has been a natural passway between East and West, between the tropical lands of southern Asia and the temperate lands around the Mediterranean. Time and again, through ages, rival peoples have struggled for control of the passway.

On the shores of the Mediterranean. Civilization in Europe began at the southeastern corner. There the peninsula of Greece and its outpost islands reached toward areas in southwestern Asia and northeastern Africa where civilization was centuries old. The islands were steppingstones. When this corner of Europe got grain and livestock from the older cradles of civilization, the people took up farming and stock raising and began their forward march in civilization. For a long time the people on the larger islands were ahead of those on the mainland.

These southeastern Europeans raised wheat, barley, grapes, and olives in the many small valleys and plains that face the sea. Bread and wine and olive oil became their chief foods. These are common foods of most Mediterranean peoples to this day. In the rainy winter, shepherds tended their flocks on near-by hillsides, where they found good pastures. And so they do today.

Civilization first reached the shores of the western Mediterranean by water, not by land. Seamen from ports on the coast of Syria (Fig. 5), seamen called Phoenicians, were the first to explore the western end of the great sea. They became the greatest merchants on the Mediterranean. After a time, they were followed westward by Greek merchants. Trade led to the founding of many colonies. Finally, there were settlements of civilized people

here and there along both the northern and southern sides of the Mediterranean, from end to end.

Contrasts. The map in Figure 5 helps one to see why there was much greater progress along the northern shore of the Mediterranean than along the southern shore, except in the Nile Valley. The southern shore has no large peninsulas or bays, few harbors, and very few islands close by. The narrow lowland along the shore is backed by mountains at the west, and by a forbidding desert farther east. Only in Egypt did early people have much room or chance for development.

On the northern side of the Mediterranean there were three large peninsulas and many small ones, many arms of the sea, many harbors and islands, many valleys and plains. The waters along shore were sheltered from storms for long distances. There were countless safe places to anchor. Behind much of the northern shore at no great distance there were mountain barriers. For centuries these mountains shielded the Mediterranean peoples from crushing attacks by northern barbarians. There was room for great development between the high mountains and the sea.

As civilization spread westward in the Mediterranean, it reached the big northern peninsulas in their order on the map (Fig. 5). It reached Greece first, as already described. From Greece it moved to Italy, the middle peninsula. Spain, the western peninsula, was the last to be reached.

Both Italy and Spain had more room than Greece for farming, more room for pasturing flocks and herds. On the other hand, they had fewer good harbors. It seems natural that in both peninsulas, Italy and Spain, farming and grazing developed earlier and more than trade by sea.

A great melting-pot. The Mediterranean turned out to be a highway connecting the peoples around its shores rather than a barrier keeping them apart. Knowledge of many



Figure 6. Portuguese ships of the 15th century

things, as well as goods of many kinds, was carried back and forth. Ideas and skills were exchanged. The Mediterranean became a “melting-pot” for surrounding civilizations.

Many things that helped human progress came from this melting-pot of the ancient world. Among them were the alphabet, great literary treasures, ideals of conduct, patterns of government and law. Such gifts to later civilization were priceless.

Helps in Learning

1. How much of the world can be seen on a globe at one time? Which part is called the Old World?
2. How did the earliest white men of the Old World probably live?
3. Do you think a city like that in Figure 3 could have grown up in ancient times in a place like that in Figure 2? Why, or why not?
4. What differences does the map in Figure 5 show between the northern and southern shores of the Mediterranean Sea?
5. How, in general, did early civilization spread in the Mediterranean region?

To the Far East

The new front. In time, the front of Europe shifted from the Mediterranean coast to the Atlantic coast. This was one of the great changes in the long story of Europe. New nations and new countries were formed. They played a great part in the later life of the Old World, as we shall see.

During the 15th century, men sailed from Atlantic ports on long voyages in ships like those in Figure 6. They could leave old landmarks behind, for they had a new aid in navigation. It was the mariner’s compass. Exploration led to trade by sea. Ocean trade led to colonization. All this is commonly called “the expansion of Europe.”

East and West. There were many reasons for exploration by sea. The greatest reason was the desire to find new routes from Europe to the Far East—to India, China, and the islands southeast of Asia (Fig. 5). The story of the old trade between East and West will make this clear.

Far to the east of the Mediterranean, be-



AFRICA

Miles
0 200 400 600 800

SYMBOLS FOR CITIES

- More than 1,000,000
- 500,000 to 1,000,000
- 100,000 to 500,000
- 50,000 to 100,000
- Other Selected Cities
- ⊙ Capitols

Principal Railroads
Conols

ELEVATION IN FEET

- More than 10,000
- 5,000 to 10,000
- 2,000 to 5,000
- 1,000 to 2,000
- 500 to 1,000
- Sea Level to 500
- Below Sea Level

yond vast deserts and high mountains, ancient civilizations had developed in India and China. In time, trade began between the East and the West in spite of distances and barriers. Caravan routes were opened through snowy mountains and over hot deserts. Towns grew up in oases in the deserts and steppes. They served as resting places and trading places on the long, hard journey between East and West, which took several months. Most of the routes from the East reached cities at the eastern end of the Mediterranean. There Asiatic traders and European traders met. Some routes, farther north, led far into Europe.

Many products of the Far East were in steady demand in Europe. Most of all, spices were wanted—pepper, cloves, nutmegs, allspice, and others. Cooking was poor. Food kept longer in hot weather if it was spiced. Precious stones, perfumes, drugs, dyes, and choice fabrics of silk and cotton were among the other Eastern products that Europeans wanted. These were things of large value, compared with their weight and bulk. They could stand expensive transportation.

Woollen fabrics, quicksilver, tin, copper, and coral are examples of things that Europe sent eastward. But Europe received far more than was sent back. Much money was used to help pay for Eastern products.

During the 15th century the flow of goods along the old routes decreased greatly. This was due chiefly to the conquests of the Ottoman Turks. They seized and closed the western end of one route after another. Europe wanted more, not less, from the East. Accordingly, many attempts were made to find an ocean route for the trade.

Portuguese expansion. Portugal, Figure 5, was first to explore the Atlantic Ocean. Little ships, like those in Figure 6, made voyages southward along the western coast of Africa (Fig. 7). After Portuguese seamen reached Cape Verde, the westernmost point of Africa, all their further exploration along the coast

had one object. It was to get round the end of the continent. Then they could sail to the spice-bearing lands of the Far East.

Progress was slow. At times, troubles in Portugal caused delays. Then, too, the earlier seamen were timid. Sometimes crews refused to sail into unknown waters beyond points on the coast that already had been reached.

Some of the Portuguese sailors believed that the waters of the ocean were kept boiling near the equator by the fierce heat of the sun. If they were to enter those waters, both ships and men would be destroyed. Such fears seem silly now. There are good reasons, however, why much of the western coast of Africa must have looked forbidding to those timid men in their little ships. Sections of the coast are pounded by surf. Other sections are bordered by deserts. Still others are edged by thick mangrove swamps. For great distances there are no harbors.

From time to time, progress was made in spite of all fears and difficulties. When the famous Portuguese navigator, Bartholomew Diaz, sailed round the southernmost point of Africa in 1488, the route to the East was open. A cape near this point was well named the Cape of Good Hope.

The Portuguese did not stop when they reached India, twelve years later. Some years afterward, Portuguese ships sailed on to the coast of southern China. Here and there along the way, Portugal founded coastal trading posts and settlements.

Portugal still holds remnants of its "shore-line empire." These include two large colonies in Africa (Fig. 7), and bits of land on the coasts of India and China.

Spanish expansion. Spain fronts on both the Mediterranean and the Atlantic (Fig. 5). From one of the Atlantic ports in the southwestern part of the country Columbus sailed away in 1492 on the voyage that led to the discovery of America.

Spain had not sought a New World. It had hoped to find a sea route westward to

eastern Asia. For a time, Spanish explorers tried to find a waterway through the barrier of the American continents. Other European explorers tried without success.

Magellan, a Portuguese explorer in the pay of a Spanish king, found the only western way there was by sea. He rounded South America, and crossed the Pacific. After discovering the Philippines, the expedition returned home by the Cape of Good Hope. It was the first expedition to sail around the world (1519-1521).

To Spain, the Philippines were "Islands of the Setting Sun." Spain looked westward to the islands. Manufactured goods were taken to Mexico, across Mexico by mule train to the Pacific, and then by boat across the Pacific to the islands. Spices, tea, and other products of the Far East were brought back by way of Mexico. Magellan's long all-water route had no part in the trade.

The colonial empire that Spain founded in the New World yielded great riches. This empire broke up during the 19th century. In 1898 Spain lost the last of it, and the Philippines too, as a result of war with the United States.

The Dutch in the East Indies. Portugal could not keep to itself the route to the East by way of the Cape of Good Hope or all the ocean trade with the East. After a time, the Dutch entered the trade. They built little forts and trading posts on the western coast of Java (Fig. 5). Finally, they extended their trade and their rule throughout most of the East Indies.

The Netherlands East Indies proved to be rich possessions. The Dutch became the leading traders of the world.

The British in India. The British people paid high prices for spices brought from the East by the early Portuguese and Dutch traders. They wanted lower prices. London merchants wanted to bring spices from the East themselves. So they began to send ships round Africa into the Indian Ocean.

In 1601, the first British trading post in India was built. It was on the west coast, about 150 miles north of where Bombay stands (Fig. 5). It opened the story of the British in India—a long and eventful story.

Near the western coast of India, all the way southward from Bombay, there is the rough mountainous edge of a plateau (Fig. 5). That was the "hard side" of the country. From Calcutta, on the eastern coast, the Ganges River and its tributaries reach far to the northwest, across an open plain. That was the "soft side." There British power was extended inland first and most. So the British became masters of the Indian peninsula by conquering it from the far side—the soft side.

India was called in time the "brightest jewel in the British Crown." Perhaps it was, but it brought great difficulties to Britain as well as great advantages. India also gave added importance to some lands farther east which Britain got later, as we shall see.

Along the way. The voyage between Europe and Asia took so long in early days that ships had to stop on the way for water and food. Naturally, there was rivalry for control of good stopping places. Cape Town, Figure 7, grew up at one of the best places. It had a good harbor, near the turning point of Africa, about halfway on the route.

The place where Cape Town stands was first occupied by the Dutch, in 1652. They grew vegetables there for the scurvy-stricken seamen of their passing ships. The British took the place from the Dutch in 1795. Some years later it was ceded to Britain, along with the territory round about.

Britain was busy for many years in getting steppingstones along the seaways. As early as 1704 it captured Gibraltar during a war with Spain. The fortress at the famous "Rock," which is shown in Figure 8, commands the entrance to the Mediterranean from the Atlantic.

The British in Australia. It was almost 175 years after the British set foot in India

before they became interested in Australia (Fig. 9). The Dutch already had been there.

Early in the 17th century several Dutch navigators touched at places along the northern and western coasts of the huge island. The land they saw was of very little use. There were long stretches of coastal swamps. There were other stretches of desert. What the Dutch had seen was in the *poorest* part of Australia. They had not seen the *best* part, in the southeast.

What the Dutch missed, the English found. In 1770, Captain James Cook charted the entire eastern coast of Australia. He brought back a good account of the country. Britain then claimed Australia. The first settlement was made at Sydney—the doorway to Australia ever since. Gradually the continent was opened up. Another “jewel” had been added to the British crown.

French efforts in the East. The French followed the British to India, after getting footholds along the route into the Indian Ocean. One of these steppingstones was in West Africa, near Cape Verde.

The French built trading posts on both coasts of India. Some of them were near British posts. The country behind the European settlements was ruled by native princes, often at war with one another. The rival trading companies took sides in some of these wars. By doing so, they gained new trading privileges, or gold and jewels, or both.

The contest in India between the British and French was more than a struggle for trade. It was a contest for control of the country. It became part of a great European war (1756-1763). The French were defeated everywhere. They were allowed to keep five tiny posts in India, but agreed to take no further part in the affairs of the native princes.

Much later, after the middle of the 19th century, France took what is called Indo-China (Fig. 5). It is larger than France itself, and has rich resources.

Helps in Learning

1. One of the first ships to reach India from Europe brought back 210,000 pounds of pepper. How many camels would have been needed to carry that amount of pepper, if each camel carried 500 pounds?

2. Goods brought *by boat* to Europe from the East were handled twice—once when the boat was loaded, again when it was unloaded. Caravan camels had to be loaded and unloaded *each day*. Why was this difference important?

3. Why do you think the leading countries of western Europe were more interested for a long time in the Far East than in Africa? As you read the following paragraphs, add to the reasons you can give now.

A Continent of Colonies

The dark continent. Little was said about European colonies in Africa in the earlier paragraphs. For more than 400 years after overseas expansion from western Europe began, little was done to open up Africa. As late as 1870 much of the continent was still unknown to the outside world. Partly for that reason, it was called “The Dark Continent.”

Britain had an area at the southern end of the continent (p. 10). France had Algeria at the northern end, and footholds on the western coast. Portugal had two colonies toward the south (p. 9), one on either coast. But in general the Europeans had been content with coastal stations and lands near them. They were not concerned about the interior of Africa.

Why Africa was neglected. Several things explain why most of Africa was neglected by Europeans for so long a time. The map in Figure 7 shows some of them.

No bays, gulfs, or seas extend far inland, bringing large interior areas within easy reach from the ocean.

Most of Africa is a plateau. Nearly all of the rivers which flow to the sea have falls or rapids where they leave the plateau. Few



Figure 8. The Rock of Gibraltar

of them could have been used as highways.

There are dense tropical forests on the hot, rainy lands along the Congo River and the lands near the coast of the Gulf of Guinea. North and south of these forests, in belts having rainy seasons and dry seasons, there are grasslands with scattered trees. Beyond the grasslands, still farther from the equator, there are vast deserts. Travel in the forests and the deserts was always hard and sometimes dangerous.

Many of the African natives were hostile.

For a long time, Europeans went to Africa chiefly for gold, ivory, and slaves. All these could be had at points on or near the coast.

Finally, the leading colonizing nations were busy in other parts of the world which seemed to offer more than interior Africa.

A change in attitude. Soon after 1870, several countries of Europe became greatly interested in interior Africa. Explorers were finding great natural riches there. A strong desire for new colonies was springing up. There were various reasons for this desire.

The leading countries of western Europe were getting ahead swiftly in industry, trade,

and wealth. They had growing strength for expansion, and a growing need for it.

The populations of most of these countries were increasing rapidly. Many people were leaving, to settle in other lands. Some of these people could be kept under their own flags in new colonies.

Many raw materials could be produced in African colonies for manufacture in Europe. The growing industries of western Europe needed new and wider markets for the goods they made. African colonies would help to provide such markets.

People with money to invest wanted new opportunities for doing so. African colonies would make such opportunities.

Colonial expansion appealed to national pride.

Everyone would be benefited by colonial expansion, it was said. In the colonies people could find work on farms, in forests, and in mines. In the home countries, manufacturers and investors, merchants and shippers, farmers and laborers, all would profit.

The great scramble. With this mounting interest in colonies, each of the leading coun-



Figure 9

tries of western Europe set about getting those parts of Africa that it wanted. In some cases, two or more nations wanted the same territory. In an effort to settle the disputes, representatives of the different countries met in Berlin in 1885. The meeting did not help much. It was agreed that each nation could control those parts of Africa which it was strong enough to take and hold.

The scramble that followed for land and power in Africa caused much bitterness.

The kind of action that had been taken at Berlin never helped peace and good will.

The outcome. The race for territory turned Africa almost entirely into a continent of colonies. The three strongest nations in the race—Britain, France, and Germany—got the three largest shares of land. Britain and France had the great advantage of good footholds in Africa when the race began. Germany and Italy had no African possessions at the outset. For the most part, they

got lands that were of rather small value.

Germany lost its colonies in World War I. Those in Africa came under control of Britain, France, and Belgium. Italy lost its African possessions in World War II. Then, Britain and France together ruled or controlled about four-fifths of the vast continent.

Britain in Africa. The areas in Africa that are related to Britain are larger than all Europe. They include the entire southern end of the continent, where there are good lands and many other resources. They form a broad belt reaching northward all the way to the Sudan. This belt has much of the higher, more promising land found inside the tropics in Africa—in Rhodesia, Tanganyika, and Kenya. The British lands also include some of the better parts of Western Africa.

France in Africa. The holdings of France in Africa are even larger than those connected with Britain. They include, however, deserts about half as large as Canada. These desert lands are in the Sahara (Fig. 7).

When the scramble for territory in Africa began, France had Algeria and Tunisia on the Mediterranean coast (Fig. 7). For many years Algeria had been ruled by pirates. They attacked shipping. They robbed and enslaved captives. Finally, the French declared war against Algeria. They sent an army into the country, and annexed it to France. The French also had trading stations on and near the Gulf of Guinea.

France wanted to add to its coastal possessions. It also wanted to connect the north-coast and west-coast colonies by getting all the desert that lay between them. Control of the desert trails would have some importance in trade. It might have great importance in war. All these things France finally accomplished.

Belgium in Africa. A famous explorer, David Livingstone, gave the world information about the great rivers, splendid forests, fertile lands, and other resources of the Congo River country. The first man who

saw clearly what this information might mean commercially was Leopold II, King of Belgium. Here was a rich prize waiting to be seized, in the very heart of Africa.

King Leopold planned at once to set up in the Congo a great state, of which he would be ruler. Immediately the region was claimed by other nations, especially Portugal. Portuguese navigators had discovered the mouth of the Congo River when feeling their way down the coast, far back in the 15th century. The dispute led to the calling of the Berlin Conference (p. 13). The conference supported King Leopold. So his plan succeeded. As a result, little Belgium today controls most of the basin of the mighty Congo River (Fig. 7).

Portugal and Spain in Africa. Portugal and Spain were the weakest countries that took part in the contest for African lands. They fared poorly.

Portugal wanted most to get an east-west belt of territory in the southern part of the continent, to connect its old colonies of Mozambique and Angola (Fig. 7). It extended both colonies inland, but could not connect them. Britain's plans for a north-south belt from end to end of the continent blocked the Portuguese.

Spain's colonies (Fig. 7) are the smallest in Africa. The only one of any importance, Spanish Morocco, became part of the independent kingdom of Morocco in 1956.

Free countries. Liberia, on the west coast, (Fig. 7), is the only country in all Africa that has never been under the control of any European power. Freed slaves from the United States settled there about 125 years ago. They founded the republic of Liberia. Later, most countries recognized Liberia as free and independent.

Ethiopia (or Abyssinia) remained free while nearly all of Africa was being seized by European countries. Most of Ethiopia is a land of high plateaus (Fig. 7), separated from the sea by a desert. It was hard to invade.



Figure 10. A freighter in the Suez Canal

In 1896, an Italian army did invade Ethiopia. It found the way very difficult, and met a crushing defeat only a few miles inside the boundary. In 1935, Italy again invaded Ethiopia, and a year later conquered the country. Italy then had bombing planes and other tools of modern war which the Ethiopians lacked. Freedom was restored to Ethiopia during World War II.

The Suez Canal. On the map, Figure 7, the Suez Canal is no more than a short line in northeastern Egypt. Nor is it striking in appearance—just a big ditch in a desert of sand (Fig. 10). But actually this canal is one of the great waterways of the world. Nearly 15,000 vessels now pass through it each year. Far more British ships than others use it. It is open to all ships in time of peace.

The Suez Canal was finished in 1869. It provided for ships a short cut by way of the Mediterranean and the Red Sea that brought East and West much closer together. This saving in distance was most important to

Britain, and the canal was called “the life line of the British Empire.” To help guard the northern approaches to the canal, Britain secured the island of Cyprus (Fig. 5). To help guard the southern entrance to the Red Sea, Britain occupied British Somaliland (Fig. 7), and fortified Aden, at the corner of Arabia (Fig. 5).

Of course, other countries also were interested in the great trade route through the Suez Canal and the Red Sea. The interest of France led that country to enter French Somaliland (Fig. 7). The interest of Italy led it to found a colony in Eritrea (Fig. 7), now lost.

British troops left the canal zone in 1956. When the United States, Britain, and the World Bank withdrew their offer to help finance the building of the Aswan dam on the upper Nile, Egypt, in reprisal, took over the Suez Canal Company, which was largely a British and French concern. Fearing Egyptian aggression, Israel invaded Egypt in

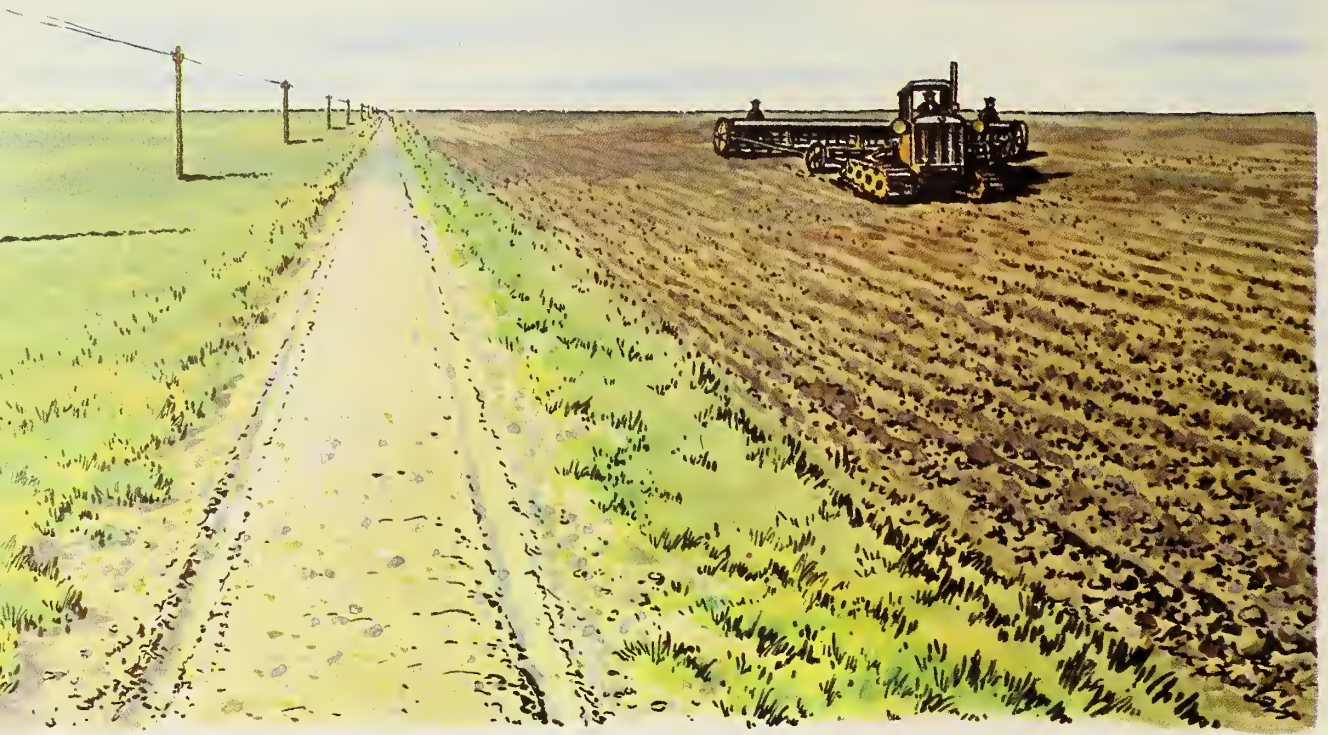


Figure 11. On the boundless Russian plain

October, 1956. Britain and France joined in the attack. The invaders agreed to a cease-fire when the United States refused to approve of their action and Russia threatened to help Egypt. A United Nations police force now patrols the troubled region near the canal.

Shifting trade routes. When the Portuguese discovered the outside route to the East, at the close of the 15th century, the Mediterranean was "side-tracked." What trade between West and East had remained to the Mediterranean Sea, and the old caravan routes east of the sea (p. 9), shifted to the new all-water route. The Mediterranean was idle, except for local traffic. It remained idle for more than three and a half centuries. Then the opening of the Suez Canal put it back in the centre of Old World trade.

Helps in Learning

1. Which is the only continent in the Old World that is crossed by the equator (Fig. 1)?

2. How did Africa become "a continent of colonies"?

3. Why was Africa divided up so late?

Eastern Europe and Northern Asia

Russian expansion. Figure 11 shows flat land in Russia and suggests great distances. Much of Russia, like the land in the picture, is a nearly level plain. Distances there are truly great. From Moscow, capital of Russia (Fig. 5), to Vladivostok, chief Russian port on the Pacific, the distance by rail is about 5400 miles. The southern boundary, curving for thousands of miles from Vladivostok to the Black Sea, is the longest land frontier in the world. Russia is immense. That is the most important single fact about it. Enlarged by World War II, Russia now contains nearly one-sixth of all the land in the world. Russian territory is all together, not scattered.

Five hundred years and more ago the



Figure 12

Russians, or Muscovites, as they then were called, held only an area round Moscow. Several large rivers rise in that area (Fig. 5), and flow in different directions. These rivers and other navigable rivers were highways of expansion along which Russian power moved outward—to the Baltic Sea, to the White Sea and the shores of the Arctic, to the Black Sea, and to the Caspian. The rivers and the great open plain across which they flow helped the Russians to bring eastern Europe together into one country.

In contrast, the rest of Europe, with its many peninsulas, islands, seas, and mountain barriers, seems to have been marked out

by nature for division into many countries.

The low Ural Mountains (Fig. 5) did not form a serious barrier to Russian expansion eastward into Asia. Beyond the Urals, the vast plain stretches eastward. Mighty rivers flow northward across this plain, and empty into the Arctic Ocean. Tributaries of these rivers, reaching far out on either side, guided the Russians toward the Pacific. Finally, northern and northeastern Asia were united with most of the plain of eastern Europe under the power of the Russians.

Though the Russians now have the largest single land mass under one flag, their country has a great natural weakness. It is almost land-



Figure 13. Modern trade in an ancient land

locked, in spite of its long coast lines. It is hemmed in on the north by the frozen Arctic. It has only a few outlets, none very good, on the Pacific. The “windows” toward the west—the Baltic at the north and the Black Sea at the south—could be closed by other nations.

Rival interests. Since World War II, Russia has demanded control of the outlet from the Black Sea to the Mediterranean (Fig. 12). In more than one earlier war, it tried to get control of this outlet.

Russia has also shown of late a great interest in some of the lands between its border and the Persian Gulf. The Persian Gulf is a doorway to the Indian Ocean.

Russian pressure toward the Mediterranean and the Indian Ocean threatens the interests of various countries. The Mediterranean “life line” and the safety of India and Pakistan seem vital to Britain. Russia has long sought better outlets to ocean highways. An outlet to the Mediterranean has seemed especially important to Russia.

There is another reason why Russian interests and those of various other countries are opposed in the region shown in Figure 12. Enormous deposits of oil have been found there, in districts east and southeast of the Mediterranean. Much oil is produced already. Figure 13 shows oil tank cars near the head of the Persian Gulf. Pipelines lead from some of the oil fields to Mediterranean ports. The rich oil deposits are resources of vast importance.

Helps in Learning

1. How did Russian expansion differ from the expansion of leading countries in western Europe? Use the map in Figure 5 to show this difference.
2. Why is the longest coast line of Russia, Figure 5, the least important one?
3. The Mediterranean Sea was the centre of the ancient world. It is one of the chief centres of world interest today. Tell what you know about the sea from early times till now.

The World Today

Past and present. As we have seen, the story of civilization in the Old World covers many thousands of years. Countless changes in the conditions of life have taken place. Swift progress along many lines has been made in recent times. One has only to think of the railroad, steamship, telegraph, telephone, automobile, airplane, radio, television, and space satellites to realize this. All these are almost commonplace today.

In *some* ways, little progress has been made. The nations of the world have failed to live in lasting peace. Wars have been as frequent in later times as in earlier times. The greatest war of all time—World War II—ended in 1945. It left parts of the Old World in ruin, the people in distress.

Quite apart from wars, many millions of people live with few of the advantages, conveniences, and comforts that modern civilization has created. Some are too poor to have them. Others have not learned how to use them. Still others live in places beyond the reach of many of them.

Present and future. If nations learn how to live together in peace, how to cooperate for the good of all, more progress may be expected in much of the world in the future than has been made anywhere in the world in the past.

Science has unlocked, for instance, the greatest force in nature—the power of the atom. If atomic energy is used only for helpful purposes, in a peaceful world, it doubtless will bring amazing improvements in the conditions of life. Among other things, it will free mankind from dependence on coal and oil and water power. Coal deposits and oil deposits can be used up, and cannot be replaced by man. Water power, abundant in some parts of the world, is lacking in others. Atomic energy gives just one example of the many great opportunities that lie ahead for the people of the world if

they are only wise enough to seize them.

Past and future. The people living today are tied both to the past and to the future. They are the descendants of unnumbered past generations. They are the ancestors of generations to come. The conditions under which they live were partly shaped in the past. What they think and do will partly shape conditions in the future. They are only life-tenants of the world. They should try to leave the world a better, not a poorer, place for human life.

Commerce and civilization. The development of commerce has made up much of the story of man's progress. The first men who settled in Egypt or Babylonia must have raised or made all they had—their food, clothes, tools, and houses. Later, one group could raise food, or make tools, or do work of some other kind, exchanging with other groups the surplus of what it raised or made for what it needed. Then trade gradually developed between different regions and countries and continents.

European expansion was in large part a search for new opportunities in trade. It carried European civilization to all parts of the Old World, and to the New World.

As trade developed and spread, the peoples of different parts of the world became more and more dependent upon one another. That *interdependence* is far greater now than ever before.

The colonial world. There is great unrest today in many European colonies. These colonies want to be free. The Netherlands East Indies and India, for example, both demanded independence after World War II. Both of them succeeded in getting their freedom, as we shall see later.

Native independence movements have been under way for a long time. They were strengthened by the unrest growing out of World War II. The map of the colonial world is changing greatly.

European colonization brought undesir-



Figure 14

able things to some parts of the Old World where there were large native populations. In most cases, it also brought much good. Law and order were established. Communications were opened up. Natural resources were developed. Education was introduced. Public health was improved. Africa, for example, would still be a "Dark Continent" for the most part if Europeans had not made colonies there.

The shrinking world. Distance is measured in time and cost of travel and transportation, as well as in miles. Where railroads took the place of carts and caravans, distance by land was partly overcome. Where steamships replaced sailing vessels, the barrier of distance by sea was reduced. And now, almost day by day, airplanes make longer non-stop flights, and make them in less time. Peoples living far apart are being drawn together, whether they like it or not. In some ways, the world is shrinking.

Sea power was all important in the expansion of Europeans, except that of the Russians. Hereafter, control of airways may be far more important than control of seaways.

The Great Powers. Much has been said and written about the "Five Great Powers." These are the United States, Britain, France, Russia, and China. All except the United States are Old World powers. Life in the Old World lands connected with them is described in the next four chapters. Life in other Old World lands, many of them not mentioned in these opening pages, is described in later chapters.

Helps in Learning

1. Which is the only continent in the Old World that has no land in the tropics (Figs. 1, 5, 7, 9)?
2. Which continents have very irregular coast lines (Figs. 5, 7, 9)? Which have not?
3. The highest mountains in Eurasia are near what coasts (Fig. 5)? To what oceans, seas, or other bodies of water do the longer rivers flow?
4. In what continent or continents are there large areas that do not slope to any ocean (Figs. 5, 7, 9)?
5. Give as many reasons as you now can for European expansion.
6. What is meant by "the *shrinking world*?"



Figure 15. The Houses of Parliament and the River Thames

THE BRITISH COMMONWEALTH AND RELATED LANDS

Lands and names. In the British Isles, Figure 14, there are two large islands. The larger one is Great Britain. The other is Ireland. Most of Ireland is a new self-governing country. It is the Republic of Ireland. The part of the island not in the Republic is called Northern Ireland.

Great Britain and Northern Ireland are *one* country. This country has a long title—the “United Kingdom of Great Britain and Northern Ireland.” It is usually called just the United Kingdom, or Britain.

Besides Britain and our own country, there are eight independent members of the Commonwealth. These are Australia, Ceylon, Ghana, India, the Federation of Malaya, New Zealand, Pakistan, and the Union of South Africa. The Federation of Nigeria will become the eleventh member in 1960.

There are also many colonies and protectorates. Some colonies are as large as our largest provinces. Others are but tiny islands. They make up, all together, the British Commonwealth of Nations.

Across the world. Figure 14 shows the Commonwealth and related lands in the Old World. Together with such lands in the New World, they cover nearly one-fourth of the land surface of the world. They contain about one-fourth of all the people on earth.

It has been said that the sun never sets on the Commonwealth. The saying is true. British lands are scattered widely—on every continent, in every ocean. That is the chief reason why ocean routes (Fig. 14) and sea power have been so important to the British.

The heart of the Commonwealth. Figure 15 shows the Houses of Parliament on the

River Thames, in London, capital of Britain (Fig. 14). The clock in the tower at the right is known everywhere as "Big Ben." The deep, hoarse tones in which it strikes the hours have been heard often by radio in our own country.

It is in the stately buildings of Figure 15 that government work in Britain is centred. There are two branches of Parliament—the House of Commons and the House of Lords. The House of Commons makes the laws that govern Britain. The House of Lords, like our Senate, has no part in making laws.

The Prime Minister is leader of the majority party in the House of Commons. He is the chief executive in Britain, corresponding to our own Prime Minister in Canada. He has a cabinet, and chooses its members. The members of the cabinet head ministries. These are much like our government departments in Ottawa, headed by Ministers.

The people of Britain elect the members of the House of Commons. A general election is usually held every five years. The

people really rule in Britain, as in Canada, through their chosen representatives.

Our Queen "reigns but does not rule." She has no power to veto an act of Parliament, but she is a living sign of the ideas and feelings that help to hold people together in the British Commonwealth.

The House of Commons, the law-making body in Britain, does not make laws for the Dominions. Canada and the other Dominions are completely independent. They need not even stand with the mother country in war unless they wish to do so. For example, Eire, the Republic of Ireland now, did not take part in World War II, although then a part of the Commonwealth. Our country decided to go to war one week after Britain was at war. Loyalty to the Queen and the British flag, a common language, and common traditions and customs bind the free countries of the Commonwealth firmly together.

The House of Commons controls the parts of the Commonwealth that are outside the Dominions, except those which have been granted self-government.

The British Isles

London

What it is. As we have seen, London is the capital of Britain. It is much more than that, as partly suggested by the picture on the opposite page. London is the greatest European port. It is the hub of Britain's railroad system (Figs. 17 and 18). It is first among British cities as a commercial centre, a manufacturing centre, and a banking centre. Still more, Greater London is one of the two largest cities in the world. It has a population of more than eight million three hundred thousand.

London is closely surrounded by smaller cities (Fig. 17). Many of the people of these

suburbs earn their living in London, traveling back and forth each work day.

The heart of London. Figure 16 is a view over part of central London, looking downstream (eastward) along the River Thames. The huge building at the bottom of the picture is St. Paul's Cathedral. During World War II it survived heavy bombing. The cathedral stands on a low hill. Its great dome reaches high above the other roofs. St. Paul's is one of the best known landmarks in all London.

Another famous landmark is Tower Bridge, the bridge farthest downstream in the picture. The bridge next upstream is London Bridge. Tower Bridge can be opened to let



Figure 16. Looking over London

© British Combine Photos, Ltd.

ships pass into the Pool of London, just above, but big ocean liners and freighters dock farther downstream. Ships cannot pass London Bridge. This bridge, some 60 miles from the sea, marks the exact head of ocean navigation. In the picture a ship is in the Pool, alongside a wharf on the right, a little below London Bridge. Low barges can pass under London Bridge and other bridges. There are several barges in the picture.

Most of the buildings on the left (north) side of the river in the picture, between

St. Paul's Cathedral and Tower Bridge, are used by businessmen and bankers. Here is the very heart of the commercial and financial life of Britain and the Commonwealth.

Each week day more than half a million people work in this small central section of London. Each night it is almost deserted, for few people live there. In the evening or on a Sunday, the empty streets are "a sight not to be forgotten."

Street patterns and buildings. Some of the streets in London are wide. Most of them,





Figure 18. Lands, key minerals, and main industrial areas

From "The United States and Britain"
by Crane Brinton, permission Harvard University Press

like those in Figure 16, are narrow and crooked. Many of them are centuries old.

There is no general street pattern in London, as we have in our newer Canadian cities. As the city spread over the countryside in times past, it took in many suburbs. Each suburb had a street pattern of its own.

Here and there in Figure 16 some building rises above its neighbors, but there are no skyscrapers like those in Toronto or Montreal. One reason is that the clay under the surface of central London is not a good foundation for huge buildings. So business spread outward to new ground, instead of reaching upward in tall buildings. A building with eight to ten stories is uncommon. While it was difficult or impossible to build skyscrapers on the clay, it was easy to bore holes for subways through the clay. As one

should expect, there is a network of "tube railways" under central London.

Most of the houses in London are small. Thousands of little houses along hundreds of narrow streets all look much alike. They are made of brick and cement. Clay for brick and material for cement are plentiful. Timber is not plentiful. Then, too, wooden buildings would increase the fire hazard and would be less comfortable in the damp, chilly weather common in London.

The West End. The Houses of Parliament, Figure 15, are west of the part of the city shown in Figure 16. They stand on the left bank of the river, above the reach of shipping. The royal palace and various government buildings are not far away.

In general, the West End of London is a section of fine homes, smart shops, fashion-

able hotels, popular theatres, famous museums and art galleries, and well-kept parks. The air is purer and the view clearer than in eastern London. There are few smoking factories. Also the winds blow mostly from the west, carrying any smoke eastward.

The road to everywhere. For miles downstream from Tower Bridge there are huge docks and warehouses. Ships with cargoes from many lands line the docks. At times they also crowd the surface of the river. Once large ships could enter the Thames only with an incoming tide and leave only with an outgoing tide, so as to take advantage of the deeper water. Later, the channel of the river was deepened. Now the coming or going of ships does not depend so much on the tides.

Some of the streets near the docks are named after distant places. They are linked with the life of the sea. Along the streets and in the cafés and tearooms that take the place of restaurants may be seen strange sailors, speaking strange languages. They represent every seafaring nation. They will sail to ports throughout the world. That is why the Thames has been called "the road to everywhere."

The docks of London. Two docks, really basins, can be seen in Figure 16. They are on the left side of the river, a little below Tower Bridge. They look like ponds, walled in by warehouses. Farther downstream, there are much larger docks. All the docks are separated from the river by gates. The water in the docks can be kept at any level desired, whether the river itself is high or low, by the use of pumping machinery.

It was easy to dig the dock basins, for below Tower Bridge the river is bordered everywhere by very low, almost flat land. Most of the docks were made on the insides of bends in the river, so they could have outlets at both ends.

All the docks have railroads that connect with the main lines serving London. All of them also have labor-saving equipment

to handle freight, such as mechanical conveyors, giant moving cranes, and electric trucks. Some of the docks have special means of storing certain kinds of things. For example, there are elevators for grain, sheds for lumber, cold storage for meats and dairy products, and cellars for wine. Enormous quantities of things can be stored at one time. Thirty thousand tons of tobacco, for instance, can be stored at once at one of the docks.

London is chiefly a commercial city. It handles about two-fifths of the total foreign trade of Britain. The docks along the Thames are the commercial doorways that connect the city with the sea.

Factory land. The section of London below Tower Bridge is not entirely an area of docks, warehouses, and shipping. It is also an area of factories. Because of London's great size and its great commerce, it is the leading manufacturing city in Britain. It leads, even though there is no coal near at hand and most of the raw materials for its industries must come from places far away.

Most of the industries that use large quantities of coal or of raw materials brought by water to London are on the banks of the Thames. For example, the great gas works and electric power works of the city are scattered along the river. If they were back from the river, the coal they use would have to go farther and be shifted from barges to railroad cars or trucks. That would cost more. Near the grain elevators there are flour mills. By making flour in mills at the docks, the cost of shipping wheat to inland mills is saved. On the river there also are sugar refineries, petroleum refineries, soap factories, ironworks, chemical plants, and other heavy industries. Most heavy industries not on the river are located along the railroads on both sides of it.

There are many thousands of small factories and little workshops in the eastern part of London. They are scattered widely.

They do not need to be near the river or even on a railroad. They are used for hundreds of light industries. Clothing, furniture, and leather goods are examples of leading products. Many of the light industries need skilled labor, the work being done by hand or by machines run by hand.

The wholesale markets. London must have huge quantities of foodstuffs every day for its millions of people. To help handle some of the foodstuffs, there are about a dozen wholesale markets in the city. Among the products sold in these markets are vegetables and fruits, potatoes, meats, poultry and eggs, butter and cheese, and fish. Most of the products must be sold while still fresh. Many of them come from abroad. Others come from the surrounding countryside. Several of the markets are famous places that were founded centuries ago.

A long past. The story of London began 19 centuries ago, at a point where the River Thames could be forded. Farther downstream there was no good crossing place. The lower river was wide and deep. The land alongside was low and marshy. In time, a bridge was built near the ford. The bridge became a meeting place of land routes. Roads were built from it in all directions.

The Thames itself became a busy highway. It led inland from the narrow seas between Britain and the continent of Europe. Ships that came up the river could not pass the bridge. They were unloaded and loaded just below the bridge. So London, bridge town and road centre, also became a seaport.

Because of London's advantages for collecting and distributing goods, it came to be, many centuries ago, the leading place for trade in all the country. With roads coming to it from all parts of the country, it was the most convenient place for the capital.

Much later, London became the hub of the railroad system. It could not have failed to do so, for already it was the greatest road centre, the chief seaport, the commercial

leader, the capital, and the largest city of the country.

In many ways London lives in the past as well as in the present. Some of the things it has inherited from earlier centuries benefit life today. Some do not.

Helps in Learning

1. Name six ways in which London is a great city.
2. Why did a very large city grow up where London is?
3. Tell all you can about the River Thames. Why is it called "the road to everywhere"?
4. Describe the docks of London.
5. Why are there no skyscrapers in the business heart of London?
6. What are the chief differences between western London and eastern London?
7. Where are most of the heavy industries of London? Why? Name some of them.
8. What is the main fact about the location of light industries in London? Name some.
9. What do you know about the work done in the great building shown in Figure 15?

How Britain Lives

Surprising facts. Besides Greater London, giant among all cities, there are 71 cities in Britain that have more than 100,000 people. Most of the large cities are in England (Fig. 17). England is about the same size as New Brunswick and Nova Scotia combined, but it has almost 40 times as many people as the two provinces. Britain has more than 50 million people, and yet it is less than half the size of Manitoba.

It may seem surprising that there are so many cities and so many people in Britain, especially in England. It is more surprising when one notices, Figure 18, that much of the land in Britain is rather poor for farming. The country commonly produces only one-third or less of the food the people use. During World War II the fraction was in-

creased to one-half, but only by the greatest effort. How, then, does Britain live?

The explanation. Britain must import huge quantities of foodstuffs. It must also import a large part of the raw materials used in manufacturing. Of course, it must export things to pay for its imports. The British take raw materials, imported or produced at home, and make them into finished goods. They export the finished goods they do not use themselves to pay for foodstuffs, raw materials, and any manufactured goods that they import.

The British depend for a living chiefly, then, on manufacturing and foreign trade. That is why so many people can live well in Britain. That is why there can be so many large cities in the country.

Investments and ships. British people have invested much money in other countries—in factories, mills, mines, railroads, plantations, and other things. The profits from these investments have helped to support Britain.

Again, most of Britain's trade with other countries has been carried on in British ships, made in British shipyards. The money made in running the ships, as well as in building them, has also helped support Britain.

Britain has been able to tie together much of its trading and shipping and manufacturing to great advantage. "She could, for instance, buy raw cotton in New Orleans, move it in her own ships to Lancashire [the heart of the British cotton textile industry, near Liverpool, Fig. 17], spin it into thread, send the thread back in her own ships, and sell it in New Orleans. At each stage in this process, some Britisher normally made a profit."

Coal, iron, and manufacturing. Britain has rich deposits of coal and iron ore. The location of the main coal fields and ore fields is shown on the map in Figure 18. The map also shows that several manufacturing areas are right over coal deposits or close to them. Figure 19 is an industrial scene in one of

these areas. To London, as we have seen, coal must come some distance (p. 26). It is brought both by water and by rail.

Coal is by far the greatest source of power for British industries. The country has no petroleum. It has not much water power. It has little besides iron in the way of useful metals. Britain could not have become a great manufacturing and trading country without its deposits of coal and iron.

Facing hard problems. Throughout the 19th century, Britain led the world in industry and trade. British manufacturers were the first to use machines for big-scale production. For a time, the goods they made were in general better and cheaper than goods that could be made in any other country.

Gradually, Britain lost the advantage of its "head start." Other countries turned more and more to manufacturing. Some of them had far greater natural resources than Britain. Some developed new processes and new products and used the best machinery. Britain lost many markets.

Since World War II, Britain has faced harder peace-time problems than ever before. It had to sell many investments abroad to get money to help carry on the war. Many British trading ships were sunk by the enemy. The equipment in many British factories and mills had become out-of-date. Britain's recovery since 1945 has been remarkable. She has regained her position as one of the world's great traders, shipbuilders, and manufacturers. To ensure her future in these fields, Britain is constantly exploring new ways to improve her economy.

Although manufacturing and the trade it largely supports are most important to Britain, much of the country is outside of the industrial areas (Fig. 18). The industrial areas differ greatly from one another. So do other parts of the country. And the Republic of Ireland differs much from Britain. A look at several parts of the British Isles will make this clear.



Figure 19. Workers' homes near giant mills

© Gendreau

Helps in Learning

1. Do you think Britain could have become a great manufacturing country without also becoming a great trading country? Give the reasons for your answer.
2. Do you think Britain could have become a great trading country without also becoming a great manufacturing country? Give the reasons for your answer.
3. Why do British industries face harder problems today than they faced 100 years ago?
4. How does the map in Figure 18 show that most of the people in Great Britain could not live by farming?
5. How many clusters of large cities in Great Britain are shown on the map in Figure 17? Why do you think these cities are in clusters, instead of being distributed more widely over the country? The maps in Figures 17 and 18 may help you think of reasons. The following pages may help you check your reasons and add other reasons to those you think of now.

The Southeastern Corner

The Garden of England. The southeastern corner of Britain, south and southeast of London (Fig. 17), is called the Garden of England. It is an area of mixed farming, with rich, loamy soils in many places. Dairy products, vegetables, apples, cherries, plums, pears, and hops are among the things sent to London. Fruit picked in the early morning may be on sale by noon in one of the city markets (p. 27).

Gathering hops. The foreground of the picture in Figure 20 is a hop field. The picture was taken in September, the picking season. The pickers were from the grimy streets of eastern London. They had come to enjoy for a few days the fresh air, sunshine, and scenery of the open country, and to earn some extra money by helping with the harvest. The wages they receive will depend upon the weight of the hops they pick.



Courtesy British Information Services

Figure 20. Hop pickers from London

The hops from this field may be dried in the buildings with the odd white chimneys. The dry hops will be sold to brewers, for use in making beer. To support the growing hop vines, poles were set in the ground and wires or strings stretched from pole to pole.

The Downs. Not all land in this corner of England is good for crops. There are some sandy ridges with poor soil. There also are two belts of chalk hills, the North Downs and South Downs (Fig. 17). Chalk land is dry. Water soaks in quickly. Sheep are grazed on the short grass that covers parts of the hills. Most kinds of sheep need rather dry ground. On wet ground they may suffer from a disease called foot-rot. East of the South Downs there is a marshy district where farmers raise a special breed of very hardy sheep. Because these sheep can live on wet land, they have been in great demand in many parts of the world.

During World War II, much poor land on the Downs was plowed and put in wheat to

help feed Britain. Some of it is shown in Figure 21. This land had not been plowed before for 20 years.

A famous corner. The Garden of England is a beautiful countryside. Its villages and castles and cathedrals mark it as an old land in which the past lives on. Here is England's oldest and greatest cathedral. Here are the White Cliffs of Dover (Fig. 17), a landmark through centuries for travellers from the continent. Here are seaside towns that draw multitudes of people every year from London for rest and recreation.

The Southwestern Corner

Short distances. The old city of Exeter, Figure 18, is the eastern gateway to the southwestern corner of Britain, the peninsula between Bristol Channel and the English Channel. This is the part of southern England farthest from London, but Exeter can be reached by train from London in about three hours. Even the widest part of England is narrow, and most people are easily in reach of the sea. They think that to travel fifty miles in Britain is to make a long journey. Within that fifty miles the scenery might change greatly.

On the moors. The higher parts of the peninsula are open, treeless areas, called moorlands. The largest of these areas is Dartmoor (Fig. 18). There is little which will grow on the moorlands. Some grass, a hardy shrub called heather, and a fern-like plant called bracken are the only kinds of vegetation.

Few people live on the moors. Houses may be miles apart. Here and there shepherds tend their flocks of sheep.

The better lands. The valleys and other lower lands of the peninsula make up another picture. They are fertile. Though lower, they get plenty of rain, brought by damp winds from the ocean. The winters are mild, even if stormy. Severe frosts are uncommon.

Snow is rare. The summers are rather cool. These lands are well settled.

On the warmer, south-facing slopes, farmers grow daffodils, tulips, and other spring flowers, and early potatoes and vegetables. Large quantities of cut flowers are sent by fast train to London daily in their season. In some valleys, milk and cream and butter are leading products. In some, there are trim apple orchards. It is too wet for wheat.

Farmsteads and towns. The picture in Figure 22 shows tidy farm lands on the tip of the peninsula, near Lands End (Fig. 17). It is easy to see that stone is the building material used. All the houses and barns are made of local stone. Stone fences take the place of the hedges that are common in many parts of England.

The market towns are small. Most towns are pleasure resorts on the little harbors scattered along the rocky, cliff-bound coast. Everywhere, the British flock to the seaside for their vacations.

In Eastern England

A rich farming area. In easternmost England there is a very important farming area that is quite unlike other parts of the country. Nowhere else in Britain are conditions so good for mixed farming. Most of the area lies between the head of the shallow bay called The Wash, at the north, and the cities of Cambridge and Harwich, at the south (Fig. 18). Wheat is the main crop over most of the area, and potatoes the main crop near the head of The Wash.

The wheat lands. The conditions for growing wheat are excellent. The rainfall is much less than in western Britain, of course, but in most years there is plenty for wheat. The grain ripens well in the dry, sunny summer weather. Most of the soils are fertile loams. They are well drained and easy to work.

The wheat fields are plowed and harrowed in autumn, then planted as soon as pos-

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Figure 21. The harvest from new wheat lands in England

© British Combine Photos, Ltd.





Figure 22. A neat countryside

© H. Armstrong Roberts

sible. The winters are rather cold, but there is no danger that the young plants will be killed. August is harvest time.

Wheat is rotated with other crops, among them barley, clover, and some root crops. Sheep are raised on many farms. During the winter, many cattle are fattened for market. Most of the cattle are brought from farms in the rainier western part of England, where they had been pastured.

Modern machinery is used on the farms. Tractors are common. There are large estates, but also many small farms of 100 acres or less that are worked by the owners. This is not common. Much of the farm land of Britain is owned by landlords who rent it to tenant farmers.

Most of the farm people live in the little villages that dot the countryside, two or three miles apart. Here and there a larger village serves as a market town. The largest place in this part of England is Norwich (Fig. 18),

a city with a big trade. It has the largest cattle market in all England.

On the coast there are fishing towns and many holiday resorts.

Fenland. Marsh lands, called fens, once bordered the head of The Wash and reached inland for miles toward the southwest and south. Sluggish streams flowed through the marshes in winding channels. Here and there land stood out as low islands. For the most part, the district, named Fenland, was of no use.

Some 200 years ago the work of draining the fens began. Dutch engineers helped. The streams were straightened, and held between dikes. Polders were made, just as in the Netherlands.

Today, Fenland is covered with farms, worked intensively. Fenland farmers supply Londoners with most of the potatoes they use, and with large quantities of vegetables, bush fruits, and strawberries. Sugar beets

are another leading crop. There are fields of tulips. Little wonder that Fenland sometimes is called "little Holland."

Central Manufacturing Belt

Both factories and farms. A large, loop-shaped manufacturing belt in central and west-central England is shown on the map in Figure 18. There are many farms in parts of this manufacturing belt, just as there are many in the industrial belt between Toronto and Windsor in our country. There, as here, potatoes, vegetables, and dairy products from the farms are sold in the near-by cities. But manufacturing overshadows farming.

Most of the cities in the central manufacturing belt of England are smoky places. Figure 19 is a view in one of them. The mills and factories use coal mined close by. The workers live in crowded, dingy homes. Still, coal made modern British industry possible. Without coal, Britain could not be a great manufacturing country.

Each city or group of cities in the manufacturing belt has its specialty, or, at most, a few specialties.

The cotton-textile industry. In 1789 the first cotton mill with steam-driven machinery was built in Manchester (Figs. 17 and 18). As years passed, the demand for cotton goods increased. More mills were built. More and more raw cotton was imported, most of it from the United States. Many improvements were made in machinery. Coal mining increased, meeting all needs for power. Even the moist, rather even climate of the Manchester district helped. Dry and changeable air conditions would have tended to make the cotton threads brittle. In time, a giant industry developed.

Many places near Manchester share in the cotton industry, and most of them specialize in one manufacturing process or in one type of cotton goods. One town may spin only

coarse yarn. Another town may spin only fine yarn. One may weave only sheetings, another only shirtings. Others neither spin nor weave, but make dyes.

Manchester is the business centre of the district. It is a road centre, a railroad centre, and the end of a ship canal from the Mersey River near Liverpool (Fig. 17), opened in 1894. The canal made Manchester a seaport.

Liverpool and cotton. Before the Manchester Ship Canal was dug, Liverpool was the port at which all raw cotton entered, the port from which cotton goods were shipped. Indeed, the cotton trade largely explains the rapid growth of Liverpool from a village into a large city.

The cotton trade led to harbor improvements, miles of docks, many big warehouses, and railroads leading inland. One of the first railroads in Britain, opened in 1829, connected Liverpool and Manchester.

When the canal was opened, it was expected that most ships in the cotton trade would go inland to Manchester. It did not happen. Liverpool had the businessmen and bankers who handled the trade. These men had strong connections overseas with exporters of raw cotton and importers of cotton goods. Old habits in trade are not easily overcome.

Though Liverpool is concerned most with cotton, it has many other interests. Its grain elevators, where Canadian wheat is often stored, its cold-storage plants for meat, and oil tanks show some of them. Liverpool is the greatest port on the Atlantic side of Britain. London and Liverpool together handle half the foreign commerce of the country.

The woollen industry. Sheep have always been grazed on the moors along the Pennine Chain (Fig. 17). People near-by made woollen cloth in their homes long before the modern textile industries were started. Later, woollens were made in mills using water power. Many of the cloth makers moved to small mill towns that grew up where there were

rapids or falls in swift streams flowing down from the Pennines.

Then came coal, steam-driven machinery, larger mills, and bigger woollen towns. "The mills are drab and dreary, grimy with smoke, weather-beaten and shabby; the houses of the workers, dull because they are of stone, stand back to back in long rows of sheer ugliness."

Leeds is the largest of the woollen-textile centres (Figs. 17 and 18). Bradford, close by, is next in size. The woollen towns have their specialties, like the cotton towns on the other side of the Pennines. One makes cheap woollens, for ready-made clothes; another, high-grade goods; a third, worsteds; a fourth, carpeting. There are many specialties.

Once, nearness to the flocks of sheep that were pastured on the Pennine moors was important. Long since, of course, the industry outgrew that small supply of raw wool, and all others in Britain. Huge quantities of wool are imported from New Zealand, Australia, South Africa, and Argentina.

The Pennines still help in several ways. Some of the streams that flow eastward from them furnish "soft water," good for washing wool and for dyeing. The water is soft because these streams do not have in the beds of their upper channels material that will dissolve in water. The mountain streams provide water supplies for cities and towns, both east and west. And on holidays, people from the smoky, crowded manufacturing towns find fresh, bracing air and wide, open spaces on the moors.

Iron and steel industries. There are two large cities in the central manufacturing belt that have great industries which make iron and steel products. They are Sheffield and Birmingham (Fig. 18). Both are on coal fields.

Sheffield is a very old iron-smelting centre. Before the coal age, it used local water power, iron ore mined near-by, and charcoal made from wood cut in neighboring forests. Now

it uses local coal, but must import high-grade ores from Spain and Sweden. The need to import iron ore is a disadvantage, of course. It is offset, in part, by the fame which Sheffield gained long ago for its cutting tools of all kinds, and especially for its cutlery. The name "Sheffield" on the products of the city is a guarantee everywhere of high quality. Most of Sheffield is not, however, a desirable place in which to live, as the picture in Figure 19 suggests.

The Birmingham district is called "The Black Country," and with good reason. Smoke rises from many hundreds of furnaces, factories, and mills. A mantle of falling soot covers everything.

The earlier story of industry in Birmingham itself resembles that of Sheffield. Iron ore mined in the neighborhood was smelted there. Local forests furnished wood for fuel. Later, the supply of wood ran out. Iron ore had to be imported. But there was good coal right at hand for making coke. As at Sheffield, there was also the great advantage of an early start.

In and around Birmingham, products of many kinds, both large and small, are made. Among them are locomotives, railroad cars, and automobiles; nails, pens, and pins.

Other industries. The cotton, woollen, and iron and steel industries are not, of course, the only ones in the central manufacturing belt. Near Liverpool and along the Manchester Ship Canal there are big chemical plants. Stoke-on-Trent, Figure 18, is the largest of a group of towns famous for making pottery. A complete list of products would be very long.

The advantages long enjoyed by the older and larger industries have been weakened or lost (p. 28). New industries are under way. Many of them have been located away from the old coal-field centres of industry. Manufacturing is spreading southward, toward London. More and more electricity is used as power, in place of coal. Britain recently

became the first nation to experiment with large-scale production of electricity from atomic sources.

Helps in Learning

1. Which part of England described between pages 29 and 35 do you think is settled most thinly? Why? Most thickly? Why?

2. What can you tell about the northwestern corner of England from the maps in Figures 17 and 18? Would you expect it to be settled as thickly as the southeastern corner, or not? Why?

3. Find the city of Newcastle on the maps in Figures 17 and 18. On what river is it? Coal has been mined near the river for centuries.

Every year hundreds of boats have carried coal, trip after trip, from Newcastle to a very large city in southern England. What city do you think it is? Why do you think so?

The coal trade led very long ago to ship-building on the Tyne. As you read further, look for the story of another river on which many ships are built.

Wales

A rugged, rainy land. Almost all of Wales is mountainous or hilly (Fig. 17). The rainfall is heavy, and so there are numerous streams. Many of the streams have cut deep, narrow valleys in the upland. They have done much to make Wales a rugged land.

Much of the land is too rough or steep for farming, and is settled thinly. There are farms, of course, in the larger valleys and on the lowland, narrow in most places, that fringes the coast. These farms are best known for their rich pastures. The farmers always have given more attention to raising stock than to growing crops. In places, there are many cattle. Sheep are grazed in summer on steep hillsides and upland moors, and fed in winter on farms along the coast.

The coal industry. One of the great coal fields of Britain is in southern Wales (Fig. 18). Coal seams come to the surface there

on the sides of valleys that lead to the southern coast. It is easy to get at the coal. Deep shafts are not needed.

Along the narrow floor of each valley there is a row of mining villages. The cottages of the miners cling to the lower sides of the valley. Along each valley floor, too, there are one or two railroads and a road. Loaded coal trains move down slope all the way to Cardiff and Swansea, both large cities (Fig. 17), or to points near them.

Much of the coal that goes to Cardiff is a hard, high-grade kind commonly called steam coal. It has been in great demand for running steamships because it burns readily, with much heat, little waste, and little smoke. For many years Cardiff exported more coal than any other seaport in the world. Now, most ships use oil in place of coal. The market for Welsh coal has fallen off greatly.

Metal industries. Welsh coal from the mining valleys meets imported iron ore, copper, tin, and zinc at the coast. That is where they can meet at lowest cost. In or near Cardiff and Swansea there are big blast furnaces, smelters, steel mills, and plants in which tin plate, galvanized iron, and other products are made. Tin plates are thin sheets of iron coated with tin. Galvanized iron is iron coated with zinc.

Long ago there were prosperous ironworks in some of the inland towns of southern Wales. They used local deposits of iron ore. In time, most of these ores were gone. They were rather poor ores anyway, and could not be used in making steel, which was taking the place of iron for many purposes. To haul imported iron ore from the seaports up to the inland towns and later take the products back to the coast for shipment would cost much more than to take coal down to the coast to meet the ore. So most of the inland ironworks closed down. The industry shifted largely to the coast.

Some of the inland plants were able to keep going, even though forced to use im-

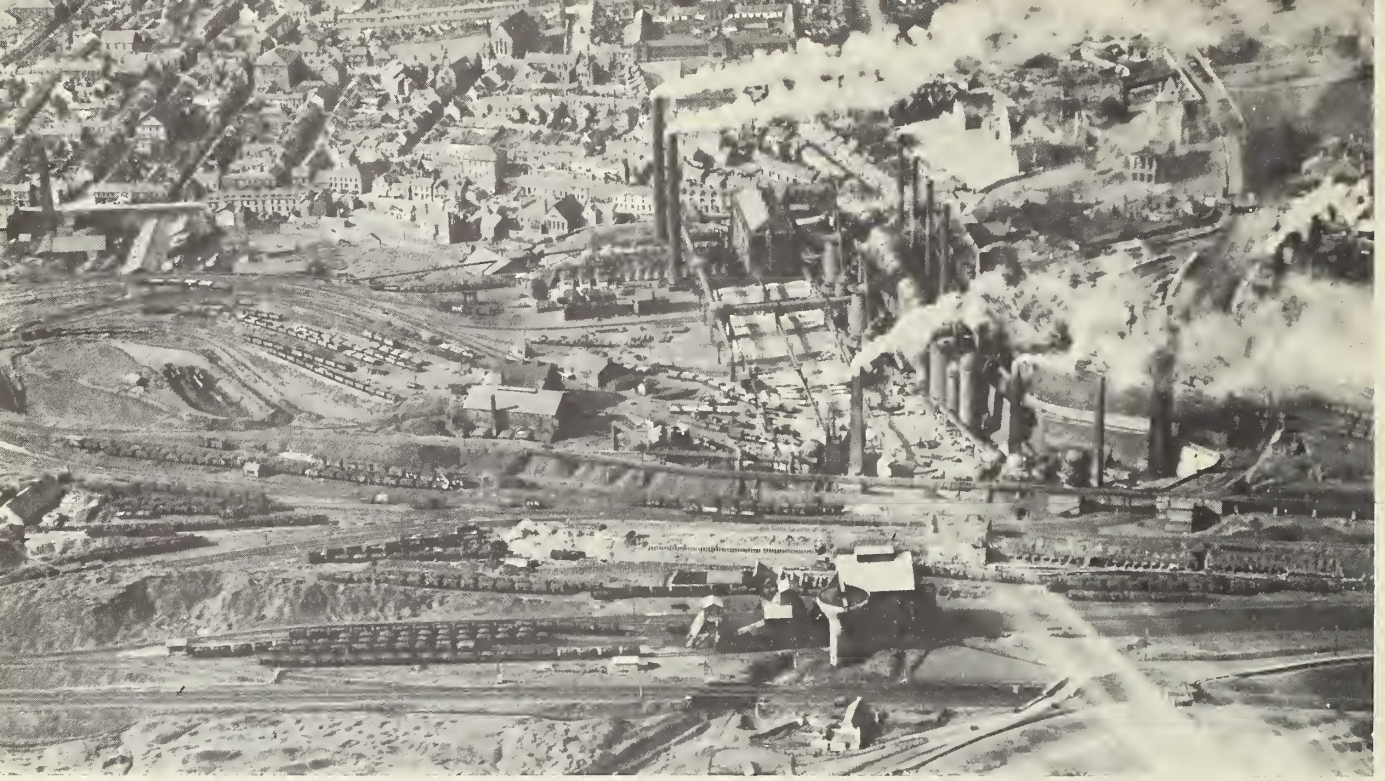


Figure 23. Ironworks in southern Wales

© Ewing Galloway

ported ores. They had skilled workers and a high reputation for some kinds of ironwork. The picture in Figure 23 is a view of one of the inland ironworks that carried on successfully.

Scotland

Scotland is divided into three parts. They differ much from one another, and from all other parts of Britain. The three parts, shown in Figure 17, are the Northern Highlands, the Middle Lowland, and the Southern Uplands.

The Northern Highlands. Rugged peninsulas reach seaward along the western coast of the Highlands. The peninsulas are separated by long, narrow arms of the sea. Countless islands lie offshore. Travel along the coast is largely by boat. Small mail steamers make regular trips. This western coast is like the fiord coasts of Norway and British Columbia.

The eastern border of the Highlands is

lower, the land is better, the climate less rainy, the population larger. A strip of farms in the valleys and on the lowland along the coast reaches to the northeastern corner of Scotland (Fig. 17).

Lonely moorlands, partly covered with heather or grass, take up more than nine-tenths of the Highlands. Here and there in a valley, near a stream or lake, a farmer makes a poor living. His nearest neighbor may be miles away, across the moors. His humble home is built of stone from the hillside. It may be thatched with heather, held down by stones. The farmer works a bit of land by hand, growing some potatoes, hardy vegetables, and oats. He has a cow, some chickens, and a few sheep. He must make the most of his few opportunities. It is a hard life, at best. Many of the younger people move away, looking for better chances. Many of them come to Canada. The population of the Highlands has been decreasing for many years.

Not all owners of land in the Highlands

are poor, and not all the farms are small. Wide areas of upland moors are divided into huge sheep farms, called ranches. The sheep are raised for mutton, as well as for wool. When ready to be fattened, the sheep are driven down to farms along the eastern coast.

The Highlands are excellent for climbers, for fishermen, and for sportsmen. Each year their popularity grows as a vacation playground. Much of the scenery in the Highlands is magnificent. High hills sweep abruptly down to sea level, or to long, narrow lakes. The countless waterfalls which rush down these hills are now being harnessed by man to make electricity. Soon this lonely and forgotten area will be of far more use to the people of Britain than it has been before.

The Middle Lowland. This lowland is an uneven plain, dotted with hills, that crosses south-central Scotland from sea to sea. With less than one-fourth of the land in Scotland, it has four-fifths of the people.

There are rich soils in most of the lowland. Farming is highly developed, especially in the eastern part, where the summers are fairly warm and dry. Oats, wheat, and barley all are grown. Apple, pear, plum, and cherry trees do well. Potatoes and vegetables thrive.

Farming alone would have made the Middle Lowland the most densely settled part of Scotland. But mining, manufacturing, and trade support far more people. The lowland had deposits of coal, Figure 18, and iron ore. The ore is nearly gone and much is imported, but rich deposits of coal remain. The mineral resources helped to bring about much manufacturing. As manufacturing grew, trade increased. Villages grew into towns, and towns into cities.

Glasgow. Near the western end of the lowland is the great city of Glasgow (Fig. 17). Like Montreal, it has more than a million people and is surrounded by a swarm of smaller places—some of them sizable cities. Though not on the coast, Glasgow is a sea

port. Time and again, over more than a century, the lower Clyde River was made deeper, to let bigger ships get to Glasgow. Today, the Clyde is famous in world trade. Like the Thames and the Mersey, it is often crowded with shipping from far and near.

There is another reason why the Clyde is famous. Along its banks on both sides are the greatest shipyards in the world. The *Queen Elizabeth*, largest ship ever built, was launched from one of these yards in 1938. Many Canadian soldiers crossed the Atlantic Ocean on the *Queen Elizabeth* during the war. Glasgow became a great shipping centre long ago, as iron ships largely replaced wooden ships. The shipbuilders of Glasgow were helped to compete with other builders by the cheapness of local coal and iron.

There are industries of many kinds besides shipbuilding in the Glasgow district. Machine tools, boilers, locomotives, bridges, pumps, cranes, sewing machines, glass, chemicals, dyes, and textiles are some of the products. The district does not specialize in a few things, as do most manufacturing cities on the coal fields of England.

Edinburgh. Near the southeastern corner of the Middle Lowland there is another great, though much smaller, city. It is Edinburgh (Fig. 17), the capital of Scotland.

The picture in Figure 24 shows some of the things for which Edinburgh is best known. In the upper left-hand corner is Edinburgh Castle, high on its great rock. This bold rock held the original town. It was a stout place in a narrow part of the coastal lowland along which the easiest route led from England into central Scotland.

On the right of the picture is Princes Street, the main street of the modern city. Along this street on one side there are hotels, clubs, and smart shops. On the other side there are beautiful gardens. The tall dark monument near the lower right-hand corner of the picture was built more than a century ago in honor of the famous writer, Sir Wal-



Figure 24. The "Athens of the North"

Courtesy British Information Services

ter Scott. The first building beyond the Scott monument is the Royal Scottish Academy. The building to the left of the academy is the National Gallery of Scotland.

Edinburgh is the centre of science and art in Scotland. It is a centre also for printing, bookbinding, and map-making. It has a famous university. The highest courts and government offices of Scotland are in Edinburgh. Sometimes the famous old city is called the "Athens of the North."

The Southern Uplands. Several important things about the Southern Uplands will be understood easily by looking at the map in Figure 17, and remembering what has been said about the other parts of Scotland. The Southern Uplands are much smaller than the Northern Highlands, and not so high. They are close to lowlands that are thickly settled. They are crossed by busy railroads and highways. The Northern Highlands, by comparison, are on "the road to nowhere."

As we should expect, there are differences

between life near the western and eastern ends of the Southern Uplands. At the west, farmers in the rainy valleys raise beef cattle and keep dairy cows. In the sunnier valleys at the east, farmers have well-stocked pastures, and also fields of potatoes and turnips, wheat and barley. In the higher parts of the uplands, above the valley farms, sheep farmers tend their flocks on the open moors.

The Republic of Ireland

A land of farms. The Republic of Ireland is a land of farms. Most of the farm land is in grass, not crops. Damp winds blow most of the time from the ocean to the west. The heavy rainfall, late springs, and cloudy summer weather are not good for many crops. They are excellent for grass. A green carpet of rich grass covers much of the land. The pasturage is always good—throughout the cool summers and the mild winters.



Figure 25. An Irish landscape

© Combine Photos

Naturally, the farmers depend more on their pastures than on their cultivated fields.

A low plain, with a broken rim of hills and low mountains, extends across the central part of the Republic, from the Irish Sea to the Atlantic Ocean (Fig. 17). This plain contains most of the good land (Fig. 18). Most of the farms and most of the people are in the better parts of the plain and in the lower valleys of the highland rim. The higher, poorer lands have been settled thinly or left vacant.

Figure 25 is a view in the centre of the plain. Whitewashed cottages are everywhere. The countryside is neat. Stock of some kind is almost always in sight. There are few trees. Most farms are small. Half of them do not contain 50 acres. Once, most Irish farmers were the tenants of big landlords. Now, most of them own the little farms that support them. They live simply, but proudly.

Leading farm products. The Republic is famous for its cattle. Many cattle begin their lives on farms in the highland rim, where they are kept until about a year old. At that

age they are sold to farmers on the central plain. There they are grazed until two or three years old. Then most of them are shipped to central and eastern England, to be fattened for market (p. 32).

Dairy farming, as well as cattle farming, is important in the Republic, especially in the eastern and southeastern parts. Almost every farmer raises pigs and poultry.

For centuries, potatoes have been the main food crop of the people. About a hundred years ago a potato disease led to a terrible famine. Partly because of the famine, many Irish came to Canada and the United States.

Oats, the grain that can best stand much cool, rainy weather, are grown in the Republic to feed stock.

Coal and peat. The Republic has very little coal, and it is hard to mine and poor in quality. This helps to explain why little manufacturing is done.

Lacking both coal and wood, most of the people use peat for fuel. Every summer several million tons of peat are cut out of bogs that are scattered over the country. A

pile of peat is found at almost any cottage.

Trade and towns. The trade of the Republic is mostly with England. Dublin, the only large city (Fig. 17), is on the best harbor of the eastern coast, at the end of railroads that lead to different parts of the country. It is opposite Liverpool, main doorway of western England. Among Dublin's exports to England are cattle, butter, cheese, poultry, eggs, bacon, pigs. Its imports include coal, wheat and flour, sugar, tea, clothing, footwear.

The inland towns, all small, are local market places. The ports on the western coast also are small. They have no trade across the Atlantic.

Northern Ireland. The Republic would like to take in Northern Ireland (Fig. 17), but most of the people there want to remain in the United Kingdom. Belfast, the only large city and seaport of Northern Ireland, faces Glasgow just as Dublin faces Liverpool.

Britain and the Sea

Sea trade. As we have seen, the British Isles cannot produce nearly enough, either of food or of raw materials, to support all the people. Many things *must* be imported, and to pay for them, many other things *must* be exported. All these things must come and go in ships. Life in the islands has always been tied closely to the sea.

Harbors. Fortunately, there are hundreds of good harbors along the coasts of the islands. Fortunately, too, there are scores of rivers that small boats, at least, can enter with the help of the tides. The harbors of the greater ports have been improved time after time, to admit larger ships.

Fisheries. Some of the ports on every side of the islands are used by fishing craft. The best fishing grounds are in the shallow waters of the North Sea. Three-fourths of all the fish sold in the British Isles come from those waters. And so the leading fishing towns are on the eastern coast, from Aberdeen in Scotland to Yarmouth in England (Fig. 17).

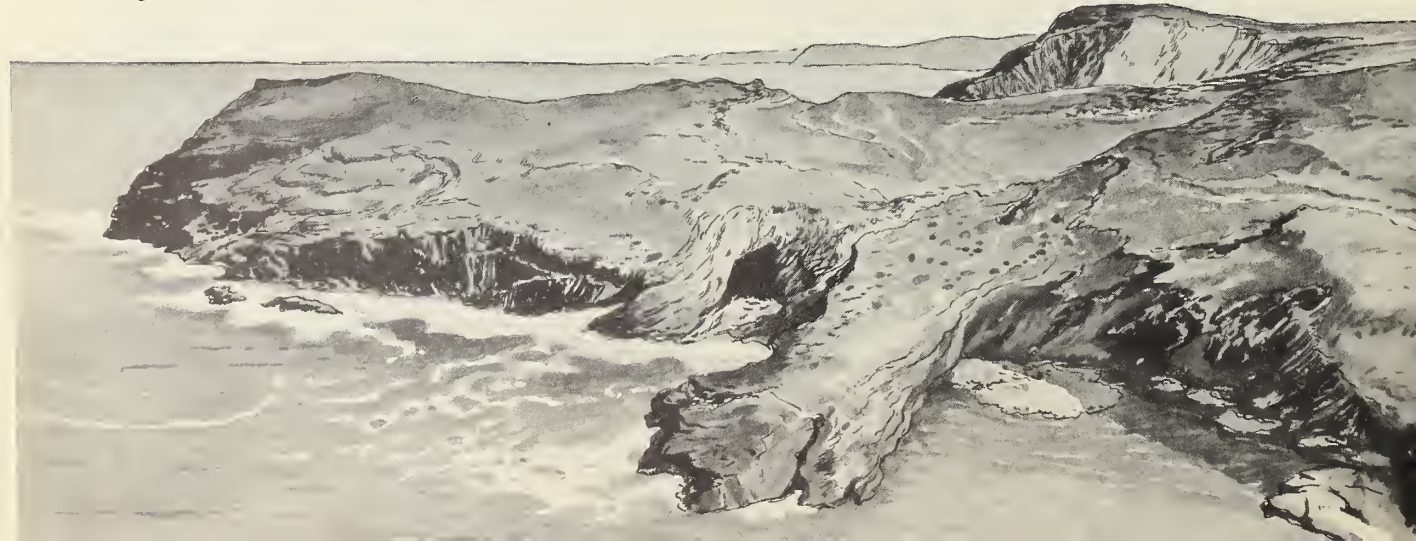
The fisheries give work to large numbers of people on shore. These people clean and salt or smoke fish, make fish barrels and nets, build and repair fishing boats, ship and sell fish. At the height of the herring season, seven fish trains have left Yarmouth in a single day. It is a short run from Yarmouth to London, the greatest market for fish.

The fisheries not only provide work for hundreds of thousands of people but also help to feed millions of people. Still more, early experience in fishing at sea helped the British to develop trade by sea.

A good location. No country is located better than Britain for trade with many lands. At first, nearness to Europe was most important. Southeastern England was the

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Figure 26. On a rock-bound coast



“front” of the country. London was the one great commercial port. Later, as British trade spread everywhere, the location of Britain on the seaways of the world became more and more important. Northern and western England developed rapidly. Liverpool and Glasgow became great port cities. Britain had two fronts.

Defence. The seas that surround the British Isles have always made invasion by an enemy difficult or impossible. And though there are many harbors, three-fourths or more of the coastline is defended by dangerous cliffs. It would have been impossible for invaders to land at such a place as that in Figure 26. Clearly, the rock-bound sections of the coast reduced greatly the number of places to be guarded.

Britain has had to have a powerful navy to protect its merchant ships at sea. With such a navy, it felt secure. This security was shattered by aircraft bombers during World War II. With the invention of the intercontinental ballistic missile, Britain allowed the United States to station missile launching sites on its territory. Defence spending is Britain's most pressing problem.

Helps in Learning

1. What reasons can you give for each of the following?

- The lines of long, narrow villages in the valleys of southern Wales.
- The blast furnaces and steel mills at Cardiff.
- Ranching in the valleys of northern Scotland.
- The dense population near the western end of the Middle Lowland of Scotland.
- The large amount of pasture land in the Republic of Ireland.
- The small amount of manufacturing done in the Republic of Ireland.

2. About rainfall, Figure 27.

- Compare the amount of rain that falls



Figure 27. Rainfall in the British Isles

in a year on western Ireland and on eastern Great Britain.

(b) Does this difference in rainfall show that moisture-laden winds usually blow from the North Sea, or the Atlantic Ocean?

(c) By comparing Figures 17 and 27, fix on the rainfall map the areas of highest land in Wales, England, and Scotland. Is the rainfall of those areas high or low? Why?

(d) Check with Figure 27 any statements on earlier pages that you remember about rainfall in the British Isles. How many statements did you remember? Check your memory with the text. How many statements, if any, had you failed to recall?

3. Why is fishing more important off the east coast of the British Isles than off the west coast?

4. Has it been an advantage, or a disadvantage, to the British people that their homeland is a group of islands? Give reasons.

5. Why did the Manchester Ship Canal not reduce greatly the cotton trade of Liverpool?

6. How has the location of the British Isles helped the British people?



Figure 28. Table Mountain and Cape Town

Commonwealth Lands in Africa

South Africa

Gateway city. A sea voyage of some 17 days from England brings a traveller to Cape Town (Fig. 7). Before the opening of the Suez Canal, this historic city was the main port on the sea route from Britain to India, Australia, New Zealand, and eastern Asia (p. 10). Today, Cape Town is the main gateway to the Union of South Africa, a member of the British Commonwealth of Nations (p. 21).

Table Mountain, a bold landmark for seamen through centuries, stands close behind

the lower city along the harbor (Fig. 28). Steep streets, lined with houses and shops, cling to the lower slopes.

Cape Town has been called the "city of sunshine." It is just that in summer, the dry season. The white buildings, the dark mountain, and the clear sky, blue for months on end, make a striking picture. In winter, the rainy season, the view usually is less clear. Storm clouds often roll in from the sea. Mists may cover the mountain.

The business streets of Cape Town look like those of a large town in England. The style of most of the dwellings in the city and



Figure 29. A country scene near Cape Town

the neighboring countryside, Figure 29, is Dutch. People from many lands, or their descendants, live in Cape Town—English, Dutch, Negroes, Asiatics, and others.

Cape Town is one of the capitals of the Union of South Africa (Fig. 7). Parliament meets there. Pretoria, far to the northeast, is the administrative capital. Two national capitals in one country are unusual, but South Africa is unusual in many ways.

Land and people. South Africa is a large country, most of it settled thinly. It is more than five times the size of Britain. The white population is about one-fourth the population of London. Negroes outnumber the white people more than four to one. This great difference in races has raised many difficult problems.

Progress. For 200 years and more after the first settlement was made at Cape Town (p. 10), progress in South Africa was slow. Pioneers who pushed inland led a lonely, hard, and simple life. What they could not raise or make, they did without. There was little chance to sell most products. Only wool was exported to any extent.

Several times many of the Dutch, called Boers in South Africa, moved farther inland, away from the older settlements. They were restless under British rule. They wanted to be by themselves, and rule themselves. Disagreement led finally to the Boer War (1899-1902), in which the British defeated the Boers. The Boers had fought for their independence. The British had fought for their Empire. The war cleared the way for

the Union of South Africa, set up in 1910.

Meanwhile, slow growth everywhere had changed quickly to rapid growth in some places. The change was caused by the discovery of diamonds in the 1870's, and of gold in the 1880's. Immigrants rushed to the mining camps, where cities sprang up as by magic. Frequent service was opened by sea with other countries. Railroads were built from rival seaports to the mining centres. From time to time, other mineral resources were found and worked. Of course, all these things caused a demand for farm products. They also helped to start manufacturing.

Diamonds. From ancient days till now, diamonds have been chief among precious stones. They are the hardest and most brilliant of minerals. Though prized most for jewelry, they are used in many other ways. South Africa has led the world in producing diamonds for more than 80 years.

Kimberley, Figure 7, is the centre of the diamond industry. It is one of the driest, windiest, dustiest, hottest places in South Africa. Without the diamond deposits, no town would have been founded there. Ugly dump heaps of blue-green earth from which diamonds have been sorted stand beside the mines. All the heavy work in and about the mines is done by natives. Many of the diamonds are sent as "rough diamonds" to Europe and New York to be cut and polished.

Diamonds would cease to be precious stones if they became too common. Cheap things are rarely prized. In South-West Africa (Fig. 7), once a German colony but now controlled by the Union of South Africa, diamonds were found some years ago in undreamed of quantities. If prospectors and miners had a free hand there, diamonds would "flood the market." In time, they might be sold in ten cent stores.

Gold. The story of the city of Johannesburg, Figure 7, is chiefly the story of gold

mining. The city is the largest, by far, in South Africa. It is the third largest in all Africa. The mines near-by produce nearly half the world's output of gold. The city and the mines developed together.

Like Dawson, in the Yukon, Johannesburg was started in a hurry, following the discovery of gold. To begin with, it was a sprawling collection of tents and huts—a mining camp. Soon railroads replaced the trains of wagons, pulled by oxen, that first brought in supplies. Men and goods and mining equipment poured in. The camp became a bustling town. Under the magic of gold the town has become a big modern city.

Visitors to Johannesburg may be surprised by its tall office buildings, its fine hotels and theatres, its big department stores, its university and art gallery, and attractive suburban homes. Canadians find it like home in many ways, even to the neon lights, automobile buses, soda fountains, and hamburger stands. It seems out of place, deep in Africa.

The gold mines are scattered along an east-west ridge for about 60 miles, with Johannesburg near the centre. One of the mines has reached a depth of 8500 feet. All together, the mines are said to have more than 3000 miles of shafts and tunnels. End to end, they would more than reach from Halifax to Vancouver. To get a third of an ounce of pure gold, a ton of ore must be blasted, hoisted to the surface, crushed to powder, and then treated in various ways. Twenty thousand white people and 200,000 Negroes do the work.

It will be a heavy blow to Johannesburg when the mines are worked out. But large deposits of rich gold ore have been found farther south. A boom there is under way that may create a new city.

Farming. The leading farming districts are near the larger cities. The need in the cities for such things as dairy products, vegetables, and fruit influences farming near-by.

The men in Figure 29 are loading a truck

with grapes on a farm a few miles from Cape Town. The grapes will be driven to a grading and packing shed.

The southwestern corner of South Africa gets more rain than other parts of the west, as the map in Figure 30 shows. The rain is brought from the Atlantic Ocean by northwesterly winds in winter (May 1-Oct. 31). The summers are dry. Rainy winters and dry summers remind one of the Mediterranean lands and of southern California, in similar latitudes north of the equator—that is, at similar distances from the equator. The crops are similar, too. There are many vineyards, and many irrigated orchards of peach, plum, and apricot trees. Wheat is the chief grain grown in the district. Of course, it is winter wheat.

Durban (Fig. 7), the largest port east of Cape Town, is near the middle of a narrow coastal belt where sugar cane is the most important crop. In this section, there are heavy summer rains, hot, sunny weather between showers, and mild winters. These are all good for sugar cane. The moist, warm climate also permits the growth of such fruits as pineapples, bananas, and grapefruit. On the higher land back from Durban there are dairy farms, cattle farms, grain farms, and orchards of apples, pears, and plums.

In a large area around Johannesburg the land is used for general farming. Corn is the main crop. Many cattle and sheep are raised. There are tobacco fields, truck gardens, and apple orchards. Some of the land is irrigated. Part of the lower, warm land northeast of Johannesburg, toward the border of the country, is used to grow cotton. Most rain falls there in the planting and growing times for cotton. Dry weather comes at the right time for picking.

It is clear that rainfall, as well as markets, has much to do with farming in South Africa. Except in the southwestern corner of the country, most of the rain falls in summer. It is brought by southeasterly winds from

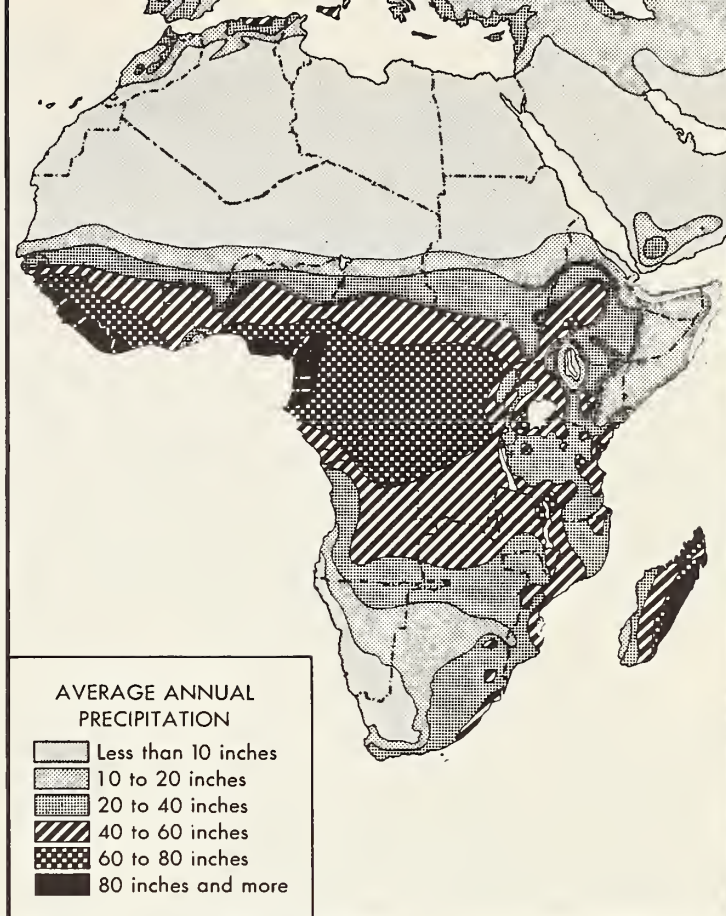


Figure 30. Rainfall in Africa

the Indian Ocean. So the eastern part of the country gets most rain, the western part least rain (Fig. 30). Nearly half the country is too dry for crops.

Corn is the chief grain in all the areas of summer rainfall. It is the main food of the Negroes. Most corn is grown in the eastern, rainier third of the country. In the middle part, the yields are lighter. Less corn is planted there. Still farther west, corn can be grown only by irrigation. Though wheat needs less rain than corn, far less wheat than corn is grown. One reason is the danger of rust, a disease of wheat plants.

The greatest risk that farmers face in most of the country is drought. Severe droughts are frequent. Some of them have caused losses of many millions of dollars. It will not be possible to reduce the risk very much by further irrigation. Less than one-fiftieth of the land can ever be supplied with water.



Figure 31. In a region of many sheep and few people

Grazing. The picture in Figure 31 shows a way in which much land unfit for crops is used. Many sheep ranches contain thousands of acres, some as many as 100,000 acres. Over wide areas of the drier land the pasturage is poorer than that in the picture. About the only vegetation may be a low, gray desert shrub. Sheep and goats feed on the shrub.

Looking ahead. Neither farming nor grazing can support very many more people than now in South Africa. But mining can support many more for a long time. In addition to diamonds and gold, the country has deposits of coal and of iron, manganese, copper, and chrome ores.

For years, efforts have been made to increase manufacturing. Now a thriving steel industry is growing up, using local coal, iron ore, and limestone. Plants have been built with money loaned by Britain and the United States to get uranium from the waste

of some gold ore mines. A good way to help manufacturing would be to improve the condition of the natives. That would create a larger home market for manufactured goods. But South Africa can hardly hope to become a large industrial nation. It is, however, the leading country in Africa.

South to North

British lands form a belt all the way from the Union of South Africa to the Sudan (Fig. 14). Some of these lands have much promise, others little promise.

A new nation. In 1953, three British lands in Africa united to form the Central Africa Federation. They were the self-governing colony of Southern Rhodesia, the crown colony of Northern Rhodesia, and the protectorate of Nyasaland (Fig. 7). The leaders of the new state hope that it may become an independent member of the Commonwealth.



Figure 32. In a native village

The people of the Federation number about 280,000 white settlers and 7,200,000 Negroes. It has rich resources in water power and coal, in copper, lead, and gold ores. The best lands for farming are the higher parts of Southern Rhodesia. The soils there are fertile in most places. The rains from the Indian Ocean are heavy enough for various crops. Tobacco, cotton, peanuts, corn, and some fruits do well. The pastures are good for cattle.

Southern Rhodesia has a much brighter outlook than its new companions. Much of Northern Rhodesia is unhealthy for white people. In Nyasaland the few white people live in the higher places and run plantations that are worked by natives.

Figure 32 shows part of a native village in Southern Rhodesia. On patches of land near their villages the natives grow corn, yams, peanuts, and tobacco. Their present way of life is very simple, but they are learning better ways.

Victoria Falls, on the Zambezi River between Southern Rhodesia and Northern Rhodesia (Fig. 7), is said to be the most famous scenic attraction in all Africa. It is more than twice as high as Niagara Falls. The roar of the falling water sometimes can be heard 10 miles away and the clouds of spray it forms have been seen 70 miles away. No wonder the falls attract many visitors!

Tanganyika. In Tanganyika (Fig. 7), there is a low, hot plain and also a moun-

tain so high that it is capped with snow though near the equator. This mountain is Kilimanjaro (Fig. 7), the highest peak on the continent. There are jungles, bushlands, and grasslands. There are well-tended plantations, and wretched native clearings. There are areas with no people, and areas crowded with people. Tanganyika is a land of contrasts.

The high lands fit for settlement by white people are small. So the British have helped the natives to produce crops for themselves that can be exported. The largest export now is sisal, grown on the drier land of the coastal belt. Tanganyika is the world's leading producer of sisal. Other exports are cotton, coffee, peanuts, and hides and skins.

The trade of Tanganyika with the outer world moves through Dar es Salaam, capital and port at the end of a railroad that crosses the country (Fig. 7). This town seems out of place in equatorial Africa. It has broad, well-shaded streets, and attractive dwellings.

Kenya. There are nearly twice as many Europeans in Kenya as in Tanganyika, but the natives outnumber them a hundred to one. The high plateau is the best place, of course, for white people to live. Even there, they must be careful, for the torrid sun is never far from overhead at noon. The equator is close (Fig. 7).

Farming is possible on lands that range from sea level up to more than 9000 feet. Near the sea, corn, sisal, sugar, cotton, and coconuts are grown. In the highlands, coffee, flax, wheat, potatoes, and beans are some of the crops.

Mombasa is the commercial doorway of the country. It has a good harbor and a railroad leading inland to Uganda, the country on the west. Unlike Dar es Salaam, Mombasa is not the capital of its country. The capital, Nairobi (Fig. 7), is a sprawling young town in the high interior.

Uganda. Uganda, Figure 7, is a black man's country. There are about five million

black people, and fewer than 4000 Europeans. The natives are the most advanced in central Africa. Cotton is the main product of the country. It is grown almost entirely by the natives, along with such foodstuffs as bananas, beans, and millet.

The cotton is shipped out by the railroad to Mombasa. More of it doubtless will be grown after more railroads and roads have been built.

The Sudan. The old name of this country, the *Anglo-Egyptian Sudan*, shows that it was held jointly by Britain and Egypt. This was provided for by a treaty between them, made in 1899. Egypt withdrew from the Sudan in 1924 but resumed joint rule with Britain twelve years later. In 1953 both governing countries gave Sudan self-government, allowing the Sudan three years to decide whether it wanted to become independent or to unite with Egypt. The Sudanese parliament chose independence in 1955. After a brief experiment in democracy, the parliamentary form of government was ended with the seizure of power by army officers in 1958.

Along the Nile River in the northern part of the country, irrigation farming supports a dense population. The farmers grow cotton, millet, vegetables, and dates.

Beyond the irrigated lands, people live in very different ways. The northern part of the country is a desert (Fig. 30). Arabs drive their camels into the desert when the brief summer rains cause grass to grow. They live in tents, and move from place to place. When water or grass is no longer to be had, they go back to their villages farther south.

The southern end of the country gets heavy rains, is marshy or swampy over great areas, and is smothered in steaming heat. It is the home of Negroes, many of whom depend for food on fish from the rivers. Others raise cattle. Some cultivate small patches of land.

Between the driest and wettest parts of the country lie steppes and savannas. The

latter are grasslands with scattered trees. The summer rainfall is moderate, and the natives grow millet, barley, wheat, beans, and other crops. They are village farmers.

Khartum is the capital (Fig. 7), the town with most foreign residents. On the opposite bank of the White Nile is the native town of Omdurman, largest in the country. These towns are the chief trade centres, the meeting places of caravan routes, roads, river highways, and railroad.

The leading products that enter into world trade are gum arabic and cotton. Gum arabic is obtained from acacia trees which grow in the savannas. It is used for mucilage. The main coastal outlet of the country is Port Sudan (Fig. 7), on the Red Sea.

British West Africa

Europeans and natives. Britain's lands in West Africa, Figure 14, are not suited for white settlers. The coastal sections are hot, wet (Fig. 30), and forested. Tsetse flies and malaria-carrying mosquitoes abound. Government officials and representatives of trading or banking firms make up most of the very small European population.

The native population of the more important lands, Nigeria (Fig. 7), Ghana, and Sierra Leone, totals almost 40 million. Formerly known as the Gold Coast, Ghana is one of the youngest sovereign states of the Commonwealth. The Federation of Nigeria has been promised full independence within the Commonwealth by October, 1960.

Products and trade. The products of the forests, mines, and native farms together with the large population, provide many opportunities for trade. It is trade alone that makes these lands important to Britain.

From the forests come palm oil, palm kernels, and mahogany. Gold, tin, manganese, and bauxite are among the mineral products. Ghana's importance dates from the time the Portuguese found gold in its territories.

More than a million acres of forest land have been cleared in Ghana for cacao farms. They furnish nearly one half of the world's supply of cacao. Farmers in the savannas of Gambia and northern Nigeria grow great quantities of peanuts for export. Most of the natives grow crops only for local use.

The exports of British West Africa are, then, raw materials—the products of forest, mine, and farm. The imports are manufactured goods, such as cotton cloth, mining equipment, and tobacco.

Helps in Learning

1. There are grain elevators at Cape Town and at Durban. What have you learned that helps to explain why the storage capacity is greater at Durban than at Cape Town?

2. Peaches from Cape Town usually begin to reach London in time for Christmas. Why do peaches ripen near Cape Town at that time of year?

Why, in general, has the time of harvest helped the fruit industry in South Africa?

3. In which direction do people who live south of the Tropic of Capricorn have to look to see the sun at noon? Verandas are common on the sunny side of farmhouses in South Africa. Which side, then, is the sunny side there?

4. Europeans enjoy skating and skiing as winter sports in part of Kenya. How can there be such winter sports in a country on the equator?

5. Tell, in a few sentences, what each of the lands related to Britain between the Union of South Africa and the Sudan is like. What are the chief crops of each of these lands? Which of these lands seem to have most promise for future development?

6. What can you say about the importance of water in the life of the Sudan?

7. Which of the related lands in West Africa do you think is probably most valuable? Why do you think so? What more would you need to know in order to be sure?

8. In what ways does Figure 33, a scene in a former British land, remind you of Figure 32?



Figure 33. Where life is hard

India and Pakistan

British India

End of a long story. In 1601, the British made their first settlement in the peninsula now shared by India and Pakistan (Figs. 5 and 34). From time to time they built more trading posts and settlements there. Finally the British became masters of most of the peninsula.

British rule in India ended in 1947. That year the British Parliament passed the "Indian Independence Act." Under this act, India and Pakistan became fully independent. They could have ended all ties with Britain had they wished. But both chose to remain

within the Commonwealth, even after they became republics, accepting the Queen as Head of this free association of nations.

Land divisions. The map in Figure 5 shows the three main land divisions of the huge peninsula of India, where Britain ruled so long. Along the northern border stand the Himalaya Mountains. The mountain wall reaches round to the northwest where Khyber Pass forms a doorway (Fig. 5). Next to the mountains lies a low, almost level plain. The southern part of the peninsula is a plateau.

The mountain wall. The Himalaya Mountains are long, high, and wide. They con-

tain Mount Everest, the highest peak in the world. All attempts to climb to the top failed till 1953, when two men succeeded. For hundreds of miles at a stretch, the Himalayas cannot be crossed by land.

The lower southern slopes of the mountains are heavily forested. At the foot of them there is a strip of jungle, the home of countless wild animals.

The great plain. Inside the mountain wall the low, almost level plain stretches for more than 2000 miles from the Arabian Sea to the Bay of Bengal (Fig. 5). The soil is rich and fine, with hardly a stone anywhere.

This remarkable plain was built up in large part with material from the mountains, brought down and spread out by the rivers. The main rivers have built up huge deltas where they reach the sea (Fig. 5).

The southern plateau. Nearly all of the peninsula south of the great plain is a plateau, called the Deccan (Fig. 5). Between the plateau and the sea on each side there is a lowland, very narrow on the west, somewhat wider on the east.

The surface of the plateau differs greatly from that of the plain, apart from being higher. There are large areas of nearly level land, but there are also rugged hills, deep valleys, and steep-sided, flat-topped mountains. There are rich crop lands, but also poor crop lands, lands fit only for grazing, and waste lands strewn with boulders. Many hillsides are forested.

Millions and millions of poor people. Nearly one-fifth of the people of the world live in the peninsula of India. Almost one in five! This is an amazing fact. It is said that eight or nine out of ten of the people live in villages, of which there are more than half a million.

Figure 33 shows part of one of the countless villages. Each of the little round huts is the home of a dozen or more persons. There are no windows. The only ventilation comes through the opening that serves



Figure 34. India and Pakistan

as a doorway. Outside, where food is cooked and some of the people sleep in good weather, it is dusty or muddy, and often very hot.

Most people in the peninsula, like those in the picture, live in great poverty. Their homes are wretched and bare. They have little to wear, and too little to eat.

Many people have thought of India as a land of riches. Perhaps they remember how early traders found spices and precious stones there (p. 11). It is still a land of natural riches. Some of the people, too, are rich. But most of the people are very poor in spite of the great natural resources. This may seem the strangest thing about India—general poverty in a land of great resources.

Some things the British did. The British were lured to India by the chance there for profitable trade. This trade grew far beyond the wildest dreams of those who started it. All in all, the British gained much from India.

The British also helped India itself. They maintained law and order. They built highways and bridges and railroads. They improved rivers and harbors. They constructed irrigation works. They carried on experiments to improve farming. They fought disease and famine. In helping India in such ways, they also benefited themselves.

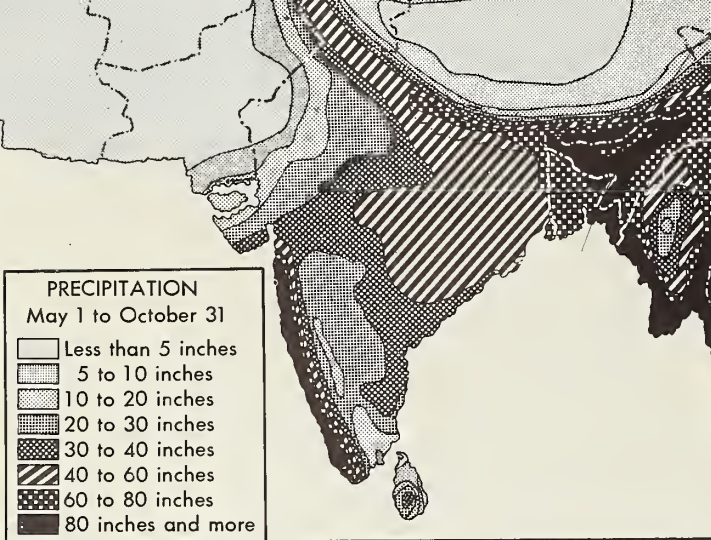


Figure 35. Summer rainfall

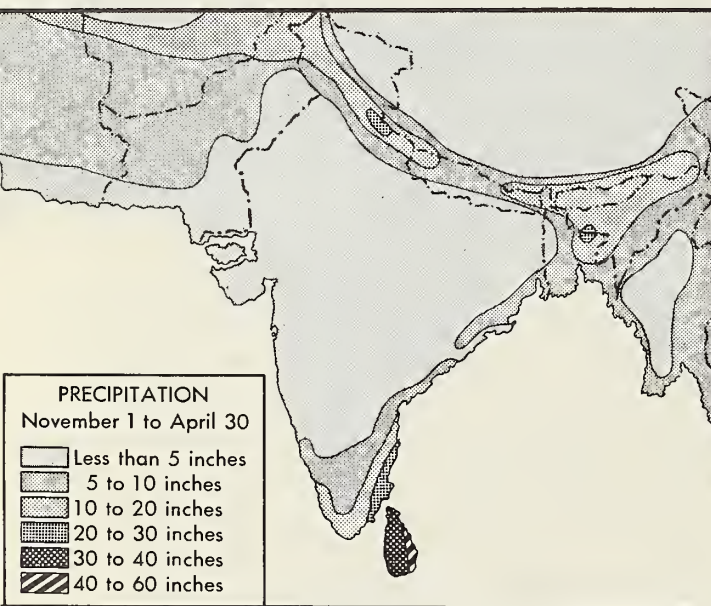


Figure 36. Winter rainfall

The New Nations

Hindus and Moslems. There are two great religious groups in British India, Hindus and Moslems. They did not get along well together. Each group wanted its own territory and its own government. So the division into two countries was made. The Hindus have the new country of India, while the Moslems have the new country of Pakistan (Fig. 34).

Complete separation of the two groups was impossible. There are still millions of Moslems in India, and there are many Hindus in Pakistan. Many people moved from one country to the other to join their fellows. More than seven million Moslems migrated from India to Pakistan.

Some comparisons. India is much larger than Pakistan (Fig. 34). It has more than four times as many people, and most of the large cities and mills. It has most of the mineral resources. It also has most of the roads, railroads, and airports.

Pakistan has two parts, East Pakistan and West Pakistan (Fig. 34). They are separated by about 1000 miles of Indian territory. This is a great disadvantage. The eastern part, with less than one-sixth of the area of the country, has more than half of the people. Pakistan is less developed than India, and it has not so many natural resources as India.

Problems between neighbors. Thus far, these new nations, in facing their problems as neighbors, have quarrelled over land and water, currency and trade.

The most bitter quarrel has been over the possession of Kashmir (Fig. 34). It was one of the many "native states" that always had been ruled in local matters by their own princes. When the Indian peninsula was divided into the free nations of Hindu India and Moslem India, each prince was permitted to choose the nation to which his state would be joined. So the Hindu states went with India, and the Moslem states with Pakistan. The ruler of Kashmir was a Hindu. Naturally he wanted to join Hindu India. But the vast majority of his subjects were Moslems. Naturally they wanted to join Moslem Pakistan. So a bitter quarrel between the two nations started, and still it has not been settled.

Plans for development. Both countries have forward-looking plans for development. India plans to build structures for the con-

tol and use of various rivers. They will provide water for irrigation, develop water power, and control floods. By planning thus for the future, India hopes to be in a better position to feed her huge population. At present, in times of famine, India must depend on other countries to send her some of their surplus crops of wheat.

India also plans to build new main highways and railroads, to improve several sea-ports, and to increase the production of iron, steel, cement, and other things. New schools and hospitals, too, are planned.

Pakistan, like India, is planning to put its rivers to useful work. It will also build cotton mills, jute mills, paper mills, and fertilizer plants. It will try especially to increase crop production, for it must remain largely an agricultural country.

If carried out, the plans just mentioned, and many others, will help to improve living conditions in both countries. If they are carried out steadily, as hoped, much help from outside will be necessary. Several Commonwealth countries, the United States, and Russia already have given some aid.

Rains, Farms, and Crops

The monsoons. The maps in Figures 35 and 36 show that most of the Indian peninsula is a land of summer rain and winter drought. In summer, moist southwest winds blow from the sea over the land. Wherever they rise for any reason, as in going over a mountain, and are cooled enough, they give up part of their moisture. In winter, dry winds blow in the opposite direction, from land to sea. These seasonal winds are called monsoons.

Unfortunately, the summer monsoon is not reliable. In one summer there may be lots of rain, and the next summer very little rain. In one year the rains may start early, and also stop soon. In another year they may start late, and continue for a long time. Lack of rain may cause widespread famine, as in



Courtesy Government of India Information Services

Figure 37. The end of a day of toil

1952. Heavy rains may cause destructive floods, as in 1953.

Irrigation. Over wide areas in West Pakistan the rainfall is not only uncertain but also so light that without irrigation the land is useless desert. And in most parts of India crop-killing droughts may occur in any year. As a result, farmers for centuries have irrigated land where they could. They lifted water from shallow wells, or stored storm waters in tanks or ponds. In recent years hundreds of deep irrigation wells were sunk. In recent years, too, big storage dams were built on some of the rivers. All told, more than 50 million acres are irrigated in the peninsula of India.

Much more water for the irrigation of much more land can be stored on various rivers that flow from the rain-catching mountains to thirsty lands below. Both countries



Figure 38. An Indian plowman in his rice field

sorely need all the irrigated land possible. Many years and great sums of money will be needed to harness the rivers. Like the rains that feed them, they are now both a blessing and a curse.

Backward farming. In India, seven workers out of ten depend on farming for a living; in Pakistan, eight out of ten. Most farms are very small. And a farm of four acres or less may be in several plots, separated by land belonging to other farms. Too many farmers have too little land, divided up too much.

The common farmer has few tools or implements. All of them are very crude. The same kinds have been used for hundreds, even thousands, of years. The two farmers in Figure 37 are returning from work to their village homes. The man in front is carrying a wooden plow; the man behind, a big rake

that is used as a harrow. These men probably never saw any modern farm machinery. Anyway, most of the farmers in both countries are so poor they could not buy machinery. Machines cost money.

Next to his land, the common farmer of India values most his cattle. He may have two bullocks and a cow. The bullocks pull his plow and his heavy cart. The farmer does not have much land that he can use for pasture or for growing fodder. His animals may eat fairly well during the summer rains, when there is grass, but almost starve before the end of the dry months. India has too many cattle, but the Hindus are not permitted by their religion to kill cattle.

Most farm land is not fertilized, however much it may need fertilizers. Dry cattle manure is used for fuel. It costs nothing. Wood is plentiful in many places outside the



Figure 39. Wheat fields won from the desert in Pakistan

great plain, but it costs too much for fuel. So does coal.

Much poor seed is planted. With poor seed and without fertilizers, much land does not produce large crops to the acre, even with a good monsoon.

The governments of India and Pakistan are spending large sums to improve agriculture. First, they are buying land from wealthy landlords and dividing it into small farms. Second, they are irrigating more land by building reservoirs. Third, they are sending farm experts to the villages. Fourth, they are encouraging the use of fertilizers.

Leading food crops. Rice is the most common food crop in all the wetter parts of India and Pakistan. Nearly level lands that can be flooded, such as are found in well-watered deltas and valley bottoms, make good rice lands. The man in Figure 38 is plowing a

rice field that is under water. It is slow work. Soon, young rice plants will be set out by hand in the water. The grain will be harvested by hand.

Wheat is a favorite grain crop in the drier, western parts of the great northern plain. It is sowed after the rains stop, grows during the mild winter, and is harvested before hot weather returns. Wheat is especially important on irrigated lands along the Indus River. Figure 39 shows fields of winter wheat on a great irrigation project that gets water from the Indus. Less and less wheat is grown toward the east, down the Ganges Valley, as the heat and rainfall increase. Some is grown in the northwestern Deccan.

Millet is much more widespread than wheat in the Deccan. It leads in most of the drier parts of India, as rice leads in the wetter parts. The ripe millet, like other grain crops,



© Frederic Lewis

Figure 40. A city where East and West meet

is cut by hand. Near many villages there are threshing floors, where oxen tread out grain as in days of old.

Of course, there are various food products besides the leading grains. There are many coconut groves on the coastal lowland south of Bombay. This lowland is drenched with rain that the mountainous edge of the plateau forces the summer winds to drop. Bananas grow near some southern villages. Potatoes and such vegetables as tomatoes, cabbages, and turnips are grown widely. Sugar cane is grown in many sections of India, especially on some of the irrigated lands of the northern plain.

On hilly slopes along the Brahmaputra River (Fig. 5), in northeastern India, there are "tea plantations." The leaves of the tea plant, a small evergreen shrub, are picked as many as 16 times a year.

Cotton. In India and West Pakistan cotton is a leading crop, but the average yield per acre is low.

The most important of several cotton-growing areas in India is in the northwestern part of the Deccan. The soil in many places

there is well suited to cotton. It is rich, and holds moisture well. The cotton is planted about the middle of June, as soon as the monsoon rains begin. The rains there usually are over by the end of October, when the cotton is ready to pick. All picking is not finished before the first of February. Much of it is done by women and children.

Jute. Jute is grown for the fibre of the stalks, which may be 10 or 12 feet tall when cut. The fibres are dried in the shade, and pressed into bales for shipment. They are used in making cheap, coarse cloth and canvas, "gunny sacks," and bags. More than four-fifths of the world's jute comes from East Pakistan.

The Larger Cities

In India. The three largest cities of India, in order of size, are Bombay, Calcutta, and Madras (Fig. 5).

Bombay. Bombay is the greatest port on the west coast. It is on an island, joined to the mainland by a causeway. The natural harbor has been greatly improved. The growth of Bombay, slow for many years, was helped very much by the opening of the Suez Canal and the building of railroads eastward into the Deccan. Nearly three million people now live in the city.

Part of Bombay is modern and attractive, as the picture in Figure 40 suggests. The buildings in sight would seem familiar in a young Canadian city. But except for the buildings, the scenes along the streets would be very strange to a Canadian. The trees are tropical. Most of the people are Indians, in native dress. Sometimes a sacred cow wanders freely along a main street, amid native carts and foreign automobiles.

Not all of Bombay is like the part in the picture. The native city is backward and ugly. Bombay is a mixture of East and West. It is a manufacturing city with big cotton mills, as well as a commercial port.

Calcutta. Calcutta was the trading post from which the British got control of the Ganges Valley (p. 10). They built it in the delta of the Ganges, some 80 miles from the coast, on one of the streams through which the waters of the great river reach the sea.

Calcutta grew as the trade of the river and the valley increased, in spite of serious disadvantages. It was hard to reach from the sea. Much dredging has been done to keep the river channel deep enough for large boats. The climate is trying. Europeans have found it hard to stay in the city through the hot, wet summers.

Today, Calcutta is a city of more than two million people. Like Bombay, it is a manufacturing centre, as well as a great port. It has jute factories and other mills.

Madras. Madras has no navigable river, like Calcutta, and no natural shelter for ships, like Bombay. The low coast is pounded by surf. A harbor was made by building two masonry walls into the sea. Madras was a good meeting place, however, for land routes from the southern Deccan.

Other Indian cities. Naturally, there are cities of other kinds in India. Among them are government cities and religious cities, or "sacred cities."

The capital city of India is New Delhi (Fig. 5). The new public buildings there are huge and costly. The streets, quiet and wide, are lined with modern homes. Close by is Old Delhi, its dirty streets crowded with poor people who live in wretched hovels.

The best known of the sacred cities is Benares, on the Ganges. It is visited by throngs of people who come to worship and to bathe in the waters of the river.

In Pakistan. The best known city, by far in Pakistan is the capital, Karachi (Fig. 5). It has grown rapidly in recent years, and now has a population of more than one million. Since it has a good harbor, an important airport, and railroad connections with the interior of West Pakistan, it is the main com-

mercial gateway of that part of the country.

In East Pakistan, Dacca is the largest city. At Chittagong, the leading port, rail and water routes meet.

Keys to Progress

India and Pakistan are determined to become prosperous nations. They are desperately trying to overcome the ever-present threat of scarcity by increasing their food resources. With the aid of the United States, Canada, Britain, and Russia, they are bringing new industries to their countries. Knowing that education is basic to prosperity, they are exerting themselves to school their millions of people. In the field of health, they are helping to fight disease. Their success will depend on their ability to produce food faster than their populations grow.

Finally, as these new nations grow and develop, they should learn to understand each other. They should become helping friends, not stubborn rivals. What happens to them in the years ahead concerns the whole world.

Helps in Learning

1. Describe the farming methods used commonly in India and in Pakistan.
2. Why have there been many famines in India?
3. Why are the rivers of India and Pakistan very important to them?
4. What are the leading three railroad centres of India (Fig. 5)? At which of them do trains meet ships?
5. The docks at Karachi, Figure 5, are sometimes piled high with sacks of wheat. How do you explain this?
6. Why is Calcutta a good place for making textiles from jute? Why is it less good for this work than was the case before 1947?
7. Why is Bombay a good place for cotton mills?
8. Madras has spread over much more ground than Bombay, although only about half as large. Why is this not surprising?

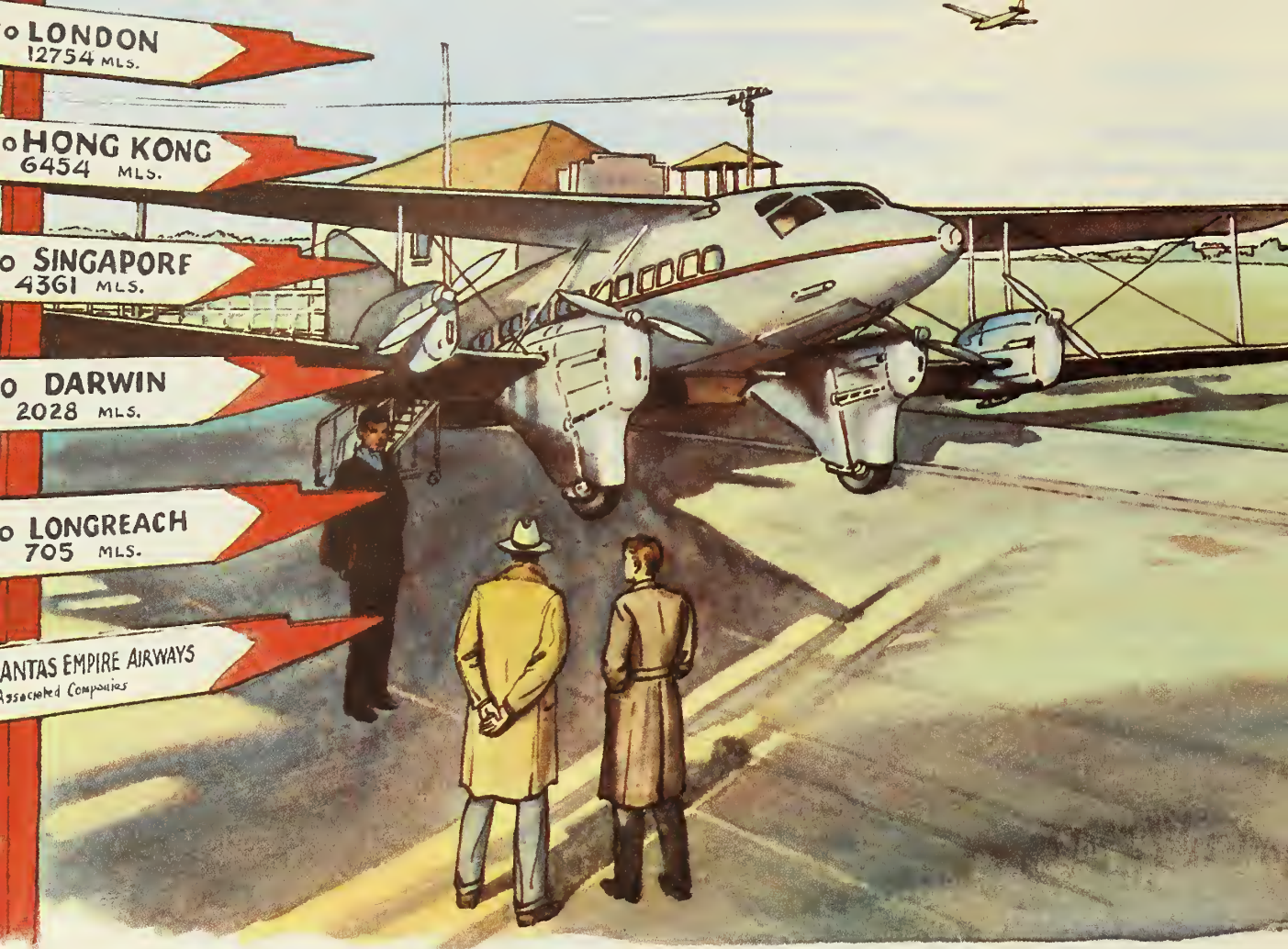


Figure 41. Fast travel over vast distances

Australia and New Zealand

Australia

Far away. Australia is far from Britain, the mother country. The drawing above was made from a photograph taken at the airport in Brisbane, a city on the eastern coast of Australia (Fig. 9). The signpost shows that it is more than 12,700 miles from Brisbane to London by the regular air route. This route leads first across Australia to Darwin, on the northern coast. Darwin is small, but

important. It is a gateway by air to all of Australia.

From Darwin, the route of the British Overseas Airways extends to Singapore, Calcutta, and Karachi, on west to the head of the Persian Gulf, overland to the Mediterranean, and finally northwestward to London. The regular flying time for the long trip, with all stops, is 37 hours.

An airplane from London, carrying passengers and mail, arrives in Australia every

day of the week. A plane leaves for London as often.

In the near future Australia and New Zealand will not be so far away from the rest of the world as they are now. Already jet airliners have shortened the distance between London and Darwin, a city in northern Australia, to less than two days' flying time.

Most traffic between Australia and Britain must still move by ship. The route between London and Sydney (Fig. 9), largest seaport of Australia, is about 12,000 miles long by way of the Suez Canal. The voyage commonly takes a fast ship 35 days. The outer route, by way of Cape Town, is about 13,000 miles long. A cargo ship usually takes 45 days for the trip. By any route, air or sea, Australia is far away from Britain.

Distant neighbors. We think of neighbors as living close together. Australia and Canada are separated by nearly 7500 miles of ocean. Even so, the people of our two countries are neighborly. We have many things in common, and similar problems to face in our vast lands.

Strange things. Some things in Australia are new and strange to a Canadian. Many of the native plants and native animals are very different from those of other lands.

There are about 150 kinds of gum trees, or eucalyptus, in Australia. Most of them do not grow in any other country. The Australian peppermint tree is said to be the tallest tree in the world. When crushed, its leaves smell like peppermint.

The kangaroo is perhaps the strangest of the animals. Its front legs are short and weak, its hind legs long and strong. So it jumps about on its hind legs, and uses its powerful tail to help it spring.

The native life of Australia is so strange largely because for untold ages the continent has been separated from other lands. It is an *island* continent.

Large and small. Australia is about three-fourths the size of Canada, and its entire

population is more than half that of our own country. Australia is a large country, then, with a small population.

For many years after the first settlement in Australia was made at Sydney (p. 11), the population grew very slowly. The country was too far from Britain, too little known, for much settlement. Then, in 1851, the world learned of rich deposits of placer gold that had been found about 100 miles west of Sydney. There was wild excitement, just as there was in the Klondike region of the Yukon in 1896. Thousands of men from Britain and other countries made their long way to Sydney and the gold fields beyond. Other deposits of gold were found later, and each important discovery attracted new settlers.

Many men who were lured to Australia by gold settled down there later to permanent work of some kind. The settlers meant far more to Australia than the gold.

Several facts throw light on why Australia has not a larger population. First, it is far from the leading markets and trade routes of the world. Second, Chinese and Japanese have not been admitted as settlers. The Australians have been determined to keep their country for the white man. Third, much of Australia is not fit for settlement.

Where and why. Figure 42 shows where the Australians live. Figure 43 helps to explain why they live where they do.

The lands near the Pacific Ocean, south of the Tropic of Capricorn, have most people. The climate there is warm, rather than hot. Rain, brought by steady winds from the ocean, may fall at any time of year. The rainfall is heaviest on the mountains back from the coast (Fig. 9). Their seaward slopes are thickly forested.

West of the mountains, the population is thinner. The rainfall is lighter than on the east side. It is also uncertain. Droughts are common. Grasslands, with scattered trees in many places, cover wide areas.

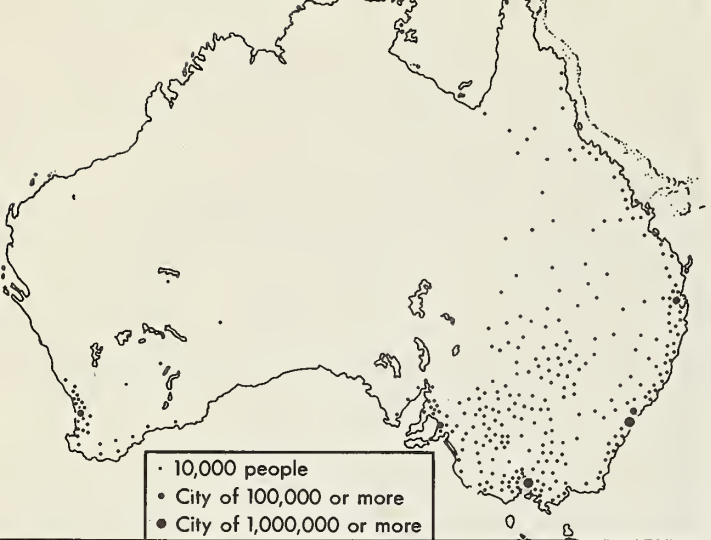


Figure 42. Distribution of population

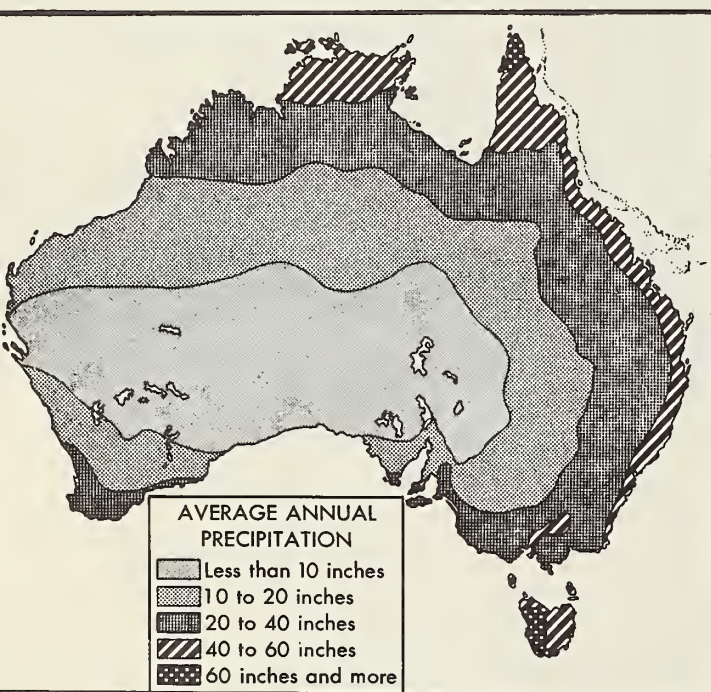


Figure 43. Distribution of rainfall

Still farther west, where the rainfall is least, there is a vast desert. It stretches in a wide belt to the coast of the Indian Ocean. This great desert is almost empty, except for some mining camps and a string of tiny settlements along the transcontinental railroad (Fig. 9), where repair men live.

The southern coast of Australia is farther south near the ends than in the middle (Fig.

9). In southern Victoria and near the southwestern corner of Western Australia the climate is like that near Cape Town, in Africa. These, then, are temperate areas of winter rains and summer drought. Both areas have many more people, of course, than the very dry lands along the middle coast.

The lowlands along the northern and northeastern coasts are not very far from the equator. They are hot, and have heavy rains in summer. Like other hot, damp, tropical lowlands they are not healthful for white people. How much of them ever can be settled permanently by the Australians is uncertain.

Sheep farming. The chief kinds of farming in Australia are stock farming and grain farming, and such scenes as those in Figures 44 and 45 are common. Far more land is used for stock than for crops, however, and far more for sheep than for cattle.

Sheep farming was begun near Sydney before 1800, with sheep brought from South Africa. Some of them were Spanish merinos. The early breeds were much improved. Finally, Australian wool came to be known as the best in the world.

As time passed, the sheep industry spread widely over the grasslands, to the borders of the desert. The best grasslands for sheep are in the cooler parts of the country, with a rainfall neither heavy nor very light, and well distributed through the year.

Most Australian sheep ranches, called sheep stations, are large. Some sheepmen own a hundred thousand acres or more, and tens of thousands of sheep.

The picture in Figure 44 shows one of the smaller stations in the northern part of New South Wales. It is owned by a veteran of World War II. He is on horseback. Only on horseback could he cover the wide spaces where his sheep are grazed. These sheep have been sheared recently. Men go from one station to another in the spring to shear sheep. They begin on the northerly stations, where



Figure 44. Sheep ranching

Courtesy Australian News and Information Bureau



Figure 45. Big-scale farming

Courtesy Australian News and Information Bureau

spring comes first, and then work southward.

The wool from the sheep in the picture will be hauled by wagon or truck to the nearest railroad, for shipment to Sydney. It probably will be exported. Wool can be stored for a long time without harm, of course, and can be shipped long distances.

Meat, unlike wool, cannot be shipped to distant markets unless dried, frozen, or treated chemically. This was unfortunate for Australia, but the problem finally was solved. One Australian learned how to make ice by the use of chemicals. He was the first man to do so. Other Australians first proved that meat could be frozen and kept on ship for a long time without spoiling. Now, with modern refrigerating plants, refrigerator cars, and refrigerator ships, Australia raises sheep to export meat as well as wool. The country also exports great quantities of beef, and even of butter. It has overcome in part the disadvantage of its isolation.

Cattle farming. The grasslands in the warmer, wetter parts of the country are suited better to beef cattle than to sheep. In such sections there are many cattle stations. They are much like the sheep stations of the drier and cooler grasslands. When big enough, the grass-fed cattle are driven or shipped to places where there are packing and freezing plants.

Dairy farming is most important near the southeastern coast. It is cooler there, and fairly rainy. Transportation is good. The farms are near the larger cities and towns of the country, which provide the best markets for dairy products.

Crop farming. Cultivated land forms only a very small part of Australia. Less than one acre in a hundred is now used for crops. More than nine-tenths of the country probably will always be unfit for cultivation, because of unfavorable climate, rough surface, or poor soils.

Wheat has always been the most important crop. More land was suited to it than to any

other crop. Like wool, it could be shipped abroad to distant markets. Today, wheat accounts for more than half of all the land in crops. The main wheat-growing districts are in New South Wales and Victoria, on the drier, inland side of the mountains. They are where there is enough winter rain, however, for wheat to grow well. The crop is planted in autumn, and harvested in late spring or early summer.

As on our prairies, many farmers raise only wheat. Many others carry on mixed farming. For instance, a man may use half his land for sheep, three-fourths of the other half for wheat, and the rest for oats. He may cut the oats to make hay, perhaps for dairy cattle. The man in Figure 45 is cutting oats for hay. This picture might be a Canadian farm scene. Australian farmers, like Canadian farmers, use labor-saving machinery.

Of course, many crops besides grain are grown in Australia. Along part of the coast of Queensland, where it is very warm and damp, sugar cane is the main crop. Near the coast of Victoria, where winters are rainy and summers are dry, there are orchards and vineyards. In Tasmania, part of Australia though a separate island, potatoes and peas and apples are leading crops.

Drawbacks. Much of the area that is used for grazing or for crops suffers from droughts and floods. Several hundred thousand cattle and several million sheep have been lost during a single long, severe drought. Many rivers overflow their banks regularly in wet weather, doing more or less damage, and either dry up or become chains of shallow pools in dry weather.

A good deal has been done to overcome these drawbacks. Great numbers of artesian wells have been bored to tap water-bearing rocks. Dams have been built on some rivers, and great works for flood control, irrigation, and power are now under way on others.

Animal pests are drawbacks, too. Rabbits,



Figure 46. In Canberra, the capital of Australia

© Gendreau

brought originally from abroad, are the worst enemies of the sheepmen. By eating grass, they reduce the pasturage for sheep. Millions of dollars have been spent in building rabbit-proof fences, and in fighting the pests in other ways. In some parts of the country, cattle ticks have caused heavy losses. They are tiny insects that suck blood from cattle.

The larger cities. For a country with a small total population (p. 59), Australia has many cities. Several of them are big cities (Fig. 9). Sydney is largest. With its suburbs, it has more than one and a third million people. Greater Melbourne is second. It, too, has well over a million people. In these two cities, surprisingly enough, live about one-third of all the Australian people.

Sydney and Melbourne are in the most productive part of the country. Each has a good harbor, and several railroads. Each has a big trade, and many industries. Each is the capital of its state.

Most of the other important cities of the

country are also on the coast or on rivers near the coast, where sea traffic and land traffic meet.

The larger Australian cities look much like Canadian cities. They have not, however, the skyscrapers so familiar in our country.

The new capital. Naturally, there has been rivalry between New South Wales and Victoria, the leading states of Australia, and between Sydney and Melbourne, their great cities. Melbourne was made the first national capital. Jealousy resulted. After a time, the problem was settled by compromise—a good way. A place for a new capital, named Canberra (Fig. 9), was agreed upon. It was in the open country, between the rival cities.

Canberra has much the same position in Australia as Ottawa has in Canada. Canberra, however, has no industries. It is a government city only. Parliament House with its beautiful grounds is shown in Figure 46.

Industry and trade. Australians take great pride in their big steel works at Newcastle.



Figure 47. The Dominion capital farthest from Britain

Courtesy New Zealand Legation

in New South Wales (Fig. 9), and in the other mills and factories near-by. Steel is needed for rails, cars, machinery, and countless other things. Newcastle is a good place to make steel. Coal and iron ore are brought together there conveniently.

Australia produces other minerals that help manufacturing and trade. Among them are copper, zinc, lead, and tin. Gold is still mined, and silver, too. But coal is most important. If Australia had to import coal, it would be hurt far more by its isolation.

Although Australia is not an important manufacturing country, it made much progress in industry during World War II. Most of the goods it manufactures are made for use at home. Australia is today manufacturing much of its own iron and steel. The chief exports are wool, meats, wheat, flour, butter, and lead. The chief imports are petroleum, cloth, paper, machinery, drugs and chemicals, and tobacco. Trade is largely with Britain,

but Canada and Australia are good customers of each other.

New Zealand

A land for tourists. A visitor to the Dominion of New Zealand might land at Wellington, the capital (Fig. 9). From one of the hills that border the city, he could have the view of the fine harbor and the well-built city that is shown in Figure 47.

From Wellington a tourist may easily visit many places of great interest. In South Island there are high mountains, called the Southern Alps. Like the Swiss Alps, they have glaciers and snow fields, waterfalls and lakes, forests and jagged peaks. Figure 48 shows one of the glaciers. On North Island there are volcanoes, hot springs, and geysers. Both islands offer many striking sights.

A land of British settlers. British men and women have found New Zealand a

pleasant country in which to live. There is room for many more of them. The population now is little more than one million nine hundred thousand, and the country is larger than Britain.

The climate of New Zealand is similar to that of Britain. In summer, the temperatures are about the same. In winter, the weather is milder, except in the high mountains. As in Britain, winds blow chiefly from the west. As in Britain, too, the west coast is rainy, the east coast drier. New Zealand, unlike Australia, never suffers from severe drought. It has no desert.

Nearly two-thirds of New Zealand is suitable for farming or grazing. Farming, stock-raising, and dairying are the chief kinds of work. On the drier, eastern side of the mountains, as in eastern England, wheat is a leading crop. The drier grazing lands are used mostly for sheep, of which there are more than one-fourth as many as in Australia. Wool, frozen mutton, tallow, butter, and cheese are the main exports. They go largely to Britain.

A land apart. In some ways, life in New Zealand must seem strange to British settlers. There are few cities. There is little manufacturing. Britain is near other lands. New Zealand is remote, about 1200 miles beyond Australia. It is the most isolated of the British Dominions. The people of New Zealand may well feel that they are very much out of the way.

Helps in Learning

1. How have the Australians partly overcome the handicap of isolation?
2. Why are sheep sheared in Australia in October and November?
3. Australia imports far more cotton goods than woollen goods. Why?
4. Australia buys jute sacking and bags from India and Pakistan. Why does it need these things?
5. What does the map in Figure 9 show about Wellington which suggests that it is a convenient place for the capital of New Zealand?
6. Do you think that Australia and New Zealand could support many more people than now live in them? Why, or why not?

[65]

Figure 48. In the Alps of New Zealand

Courtesy New Zealand Legation





Figure 49. A native section of Rangoon

© *Three Lions*

Other Lands Related to Britain

Burma. The 20 million people of Burma, Figure 5, belong to many races and speak many languages. They provide a market for British trade. That is why Burma was a desirable colony. Now, however, it is free, unconnected with Britain. It has been having a hard time alone, but has been helped by loans from the United States, Japan, Russia, and China.

Almost nine-tenths of the foreign trade of Burma passes through Rangoon (Figs. 5 and 49). This large city is on the Irrawaddy River, some 20 miles from the sea. The Irrawaddy, which can be navigated for 900 miles,

is the main highway of the country. Railroads also lead inland from Rangoon. Most of the people live on the rich delta near Rangoon, or in the fertile valleys that lie behind the city. Hundreds of villages line the river banks.

The women in Figure 49 are wearing the national dress of Burma—colored skirts that reach to the ankles, and white waists. Many women and girls weave cotton and silk, but cheap imported fabrics are used most.

Some parts of Rangoon have masonry buildings instead of wooden buildings. There are street cars and modern lighting.



Figure 50. In Singapore, near the equator

© Fritz Henle, from Monkmeyer

The scenes along the river at Rangoon tell most about the life of the city and the country. There are many mills for husking rice. Most Burmese live by farming, and rice is the leading crop. In the season when rice is exported, from early January to the middle of May, the river at Rangoon is often crowded with boats from upstream, loaded with rice. There also are mills for sawing timber that is floated down from the forested highlands. Teak wood is most important. It is hard, but can be worked easily. It resists decay, an important thing in a hot, moist climate. Oil refineries at Rangoon handle the chief mineral product of Burma.

Most of the leading items in the trade of Burma have been mentioned. The chief exports are rice, petroleum products, and teak. The chief imports are cotton goods, machinery, and hardware.

Singapore. About 125 years ago the British got from a native ruler the small island of Singapore at the tip of the Malay Peninsula

(Fig. 5). The island had little value then. Most of it was jungle. It was close to the equator. The climate was very hot. Only a few native fishermen lived there. Today, about a million Chinese and other people live on the little island, most of them in the city of Singapore. Everything has changed.

The location of Singapore, more than anything else, caused it to grow in population and importance. A glance at Figure 5 will show that the shortest route for ships between any port of eastern Asia and any port of either southern Asia or Europe is by way of Singapore. The city is at a turning point on the greatest modern sea route between the Far East and the West (Fig. 50).

The British made Singapore a "free port" — free from customs duties. That helped, too. Finally, Singapore is a collecting and distributing centre for a large surrounding area. Hundreds of little ports, some on the mainland, some on islands, send raw materials and foodstuffs in thousands of

small boats to Singapore and get back manufactured goods.

In Figure 50 one sees part of the busy water front at Singapore. Barges and other small craft are tied up along the shore, side by side. Canvas covers have been stretched over most of the boats. These covers give some protection from the fierce sun. The open ends let air pass through.

Singapore also has a fine anchorage for big ships. There one might find freighters about to sail to Britain, the United States, or some other distant country, with cargoes of rubber and tin.

Land of rubber and tin. Malaya, now an independent member of the Commonwealth, is important to the world, chiefly because of its rubber plantations and tin mines.

The first large rubber plantations in Malaya were started from 50 to 55 years ago. In 25 years, more than two million acres of thickly forested land were cleared for new plantations. Most of the plantations were owned by Europeans. Malaya became the world's greatest producer of rubber.

Rubber trees need a warm or hot and wet climate. They do best where it is moist throughout the year. That is the way it is in Malaya. Seasonal, or monsoon, winds blow over the peninsula, but they bring moisture from the sea on one side in summer and the other side in winter. In this favorable climate, rubber seedlings grow rapidly. A tree can be tapped for latex, the milky juice from which rubber is made, when five or six years old. If properly treated, the tree can be tapped for 25 or more years. By making fresh cuts in the bark every other day, a steady flow of latex is obtained throughout the year.

There is much work to be done on a rubber plantation. Cheap labor, as well as the favorable climate and the huge market for rubber, has helped the industry.

The tin mines of Malaya are open pits. The richest deposits are in valleys where

small, rounded fragments of tin ore, along with gravel and other useless material, have been deposited by streams. The tin-bearing gravel from the deposits is taken to washing sheds. Tin ore is very heavy, and the gravel, much lighter, is washed away in troughs. Most of the ore is shipped to Singapore, to the largest tin smelter in the world.

Hong Kong. Far to the northeast of Singapore, on the coast of southern China, is the little British colony of Hong Kong (Fig. 5). The colony includes the island of Hong Kong and a piece of the opposite mainland. The island was taken from China more than a century ago. The mainland area was obtained later. There are two cities in the colony—Victoria on the island, and Kowloon on the mainland. Both cities, as well as the colony, are commonly called Hong Kong.

Hong Kong is a great centre of commerce in the Far East. Before World War II, the trade was chiefly with China, Britain, India, Burma, Malaya, the Dutch East Indies, Japan, the Philippines, Australia, the United States, and our own country. Products of all these countries entered into the trade. A list of the items would be very long.

Like Singapore, Hong Kong has been a free port. That has added much to its commercial importance. Thirty thousand vessels, large and small, have visited Hong Kong in a single year.

In Figure 51 we are looking northward across the strait that forms the wonderful harbor of Hong Kong, from Victoria to Kowloon. The wharves for the biggest ocean-going ships are on the Kowloon side.

The business section of Victoria, part of it shown in the picture, hugs the shore. Farther back, the main Chinese section clings to the lower slopes of the high, rocky island. In places, there are stairways in the steep streets, between rows of close-packed buildings. Still farther back from the shore, and higher up, are the scattered homes of Europeans. The climate is much better for



Figure 51. A great harbor in a small British colony

© Screen Traveler, from Gendreau

Europeans than that of Singapore. The summers are hot and damp, but the winters are cool and dry.

The picture in the harbor of Hong Kong on the next page suggests the dark and troubled days through which Hong Kong itself and all the Far East it usually serves are passing. Wars have brought great suffering. Trouble continues, even though World War II is over. The Chinese, for example, want Britain to give Hong Kong back to China. They and other eastern people want various things. Unrest is everywhere.

The picture suggests more. The great airplane is a fast airliner. The boat in the foreground is a Chinese junk. So we see, close together, signs of new ways and old ways in living. A big, powerful plane passes swiftly over a little boat with tattered sails

that moves slowly on its way when the wind permits. To the men in the boat the roaring plane overhead may suggest many things they need if they and their kind are to enjoy better days.

Many more possessions. There are many British lands in the Old World that are not described in this book. Those large enough to be shown on a small map are entered, though not named, on the map in Figure 14. Most of them are islands in the southwestern part of the Pacific Ocean.

The natives of these islands live by fishing and simple farming. Coconut palms grow along the shores of most of the islands. The people use the trunks and leaves and coconuts in many ways. They also sell coconuts and copra to traders who visit the islands. Coconut palms have been called the "won-

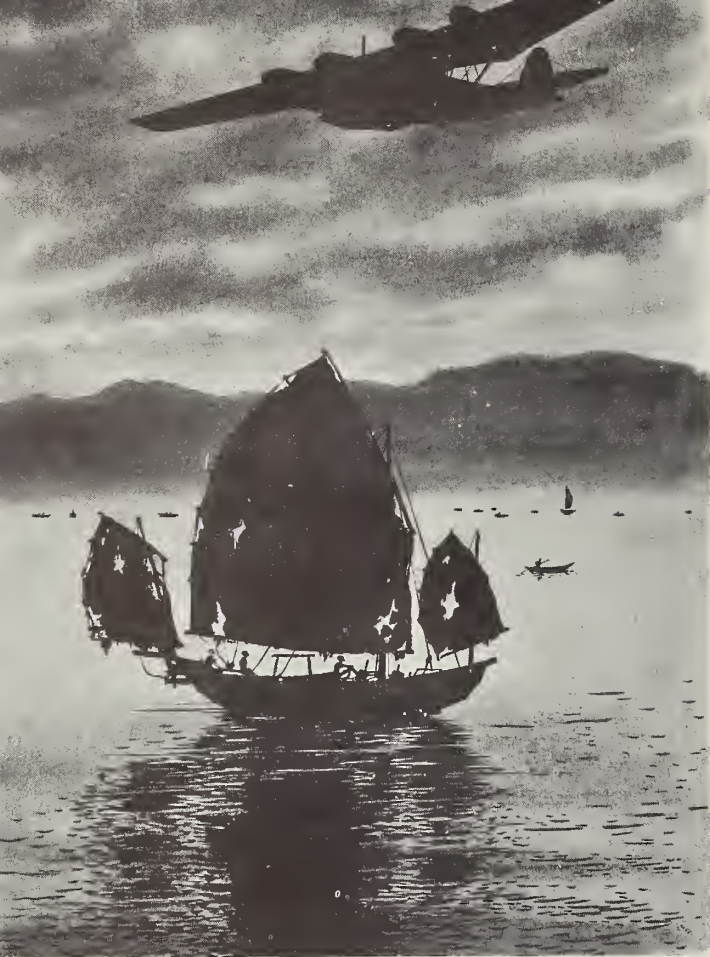


Figure 52. Yesterday and today

der trees" of the world. They deserve the name, because many, many uses are made of the trees and the fruit they bear.

Two very large islands call for special mention. They are Borneo and New Guinea (Figs. 5, 9, and 14). Until recently part of each island was owned by the Dutch. Eastern New Guinea, only about a hundred miles from the Australian mainland, is controlled by Australia. There was hard fighting on the island during World War II.

The parts of Borneo controlled by Britain front on the South China Sea. Most of the area is little developed. Some of it is little known. There are mineral deposits, including coal, oil, iron, copper, gold, and tin. Most of the deposits have not been worked. Soon or later, they will all be used.

Westward from Singapore. A voyage from Singapore to Britain by way of the Suez

Canal would follow the famous old life line of the British Commonwealth (p. 15).

The ship from Singapore probably would call at the port of Colombo, in the independent Republic of Ceylon (Fig. 5). More than eight million people live in Ceylon. The chief products are coconuts, rice, tea, and rubber. Ceylon produces more than 850 million coconuts a year.

If the ship stopped at Aden (Fig. 5), a traveller might wonder at first why Britain wanted such a place, for it is in a desert. He would soon discover the reasons. Aden is a British fortress that helps to guard the entrance to the Red Sea (p. 15). It is a calling port for passing steamers that need fuel oil, or coal, and water.

No traveller could pass through the Suez Canal without realizing its importance to world trade. It is more than five thousand miles shorter from London to Bombay by way of South Africa. The new Egyptian Suez Canal authority has shown that it can handle the large and growing amount of shipping passing through the Suez Canal. We shall learn more about these countries later.

On the way to Gibraltar (p. 10), the ship from Singapore would stop at Malta. Hardly more than a speck on the map (Fig. 5), Malta guards for Britain the passageway between the eastern Mediterranean and the western Mediterranean. It is the headquarters of the British Mediterranean fleet. Malta is one of the great "little places" of the world.

Helps in Learning

1. Britain has fortifications at Singapore and Hong Kong. Why were they needed?
2. Show how the location of a land related to Britain may have much to do with its importance. Give examples.
3. Do you think it is an advantage, or a disadvantage, that the lands related to Britain are scattered widely? Why?
4. Tell all you now can about the life line of the British Commonwealth.



Figure 53. A gateway city

© Ewing Galloway

FRANCE AND RELATED LANDS

France

The homeland. The position of France in Eurasia may be seen on the map in Figure 5. It looks small. Yet France is larger than any other country of western Europe. It is much more than twice the size of Britain. The population, 42 million, is less than the population of Britain. France, then, is not settled nearly as thickly as Britain.

France has three coasts—north, west, and south (Fig. 5). It has mountains, plateaus, and plains. As we should expect, people live very differently in different parts of the country. The pictures on these pages about France show some of the differences.

The heart of Normandy. The picture above shows part of the city of Rouen, on the Seine River, in Normandy. Figure 54 shows the location of the city, and the course of the river.

Rouen is at the head of ocean navigation on the Seine. The river is a highway for barges and other small boats much farther upstream, well beyond Paris, the giant city of the country (Fig. 54). Rouen is a doorway to the sea for Paris. Its docks, warehouses, grain elevators, oil tanks, and coal-yards are signs of a big trade.

Rouen is also an important centre of



Figure 54. A guide map

manufacturing. It is surrounded by miles of suburbs in which there are mills and factories. The cotton mills of the district are the largest in France. Rouen sometimes is called the Manchester of France. The mills use much coal from Britain, and raw cotton from the United States.

Important today for its trade and industries, Rouen is known best as an old, historic city. The famous cathedral, which looks down upon the banks and offices and shops

that now front the river (Fig. 53), was begun at the opening of the 13th century. It was not completed until the beginning of the 16th century. The old city has witnessed many stirring events. Through centuries it has been the very heart of Normandy.

Rural Normandy. The Allied armies that crossed the English Channel from Britain to help crush the German forces in World War II landed on the northward-pointing peninsula west of the mouth of the Seine

(Fig. 54). As they swarmed over Normandy, they found it to be a closely-settled region of farms and villages, crisscrossed by streams, roads, and railroads.

Normandy is a pleasant and comfortable land in times of peace. The well-kept fields are used for wheat, rye, oats, flax, and sugar beets. Dairy herds graze in the meadows. Almost every village has a dairy. Paris is the great market for milk and cream. Some of the butter is marketed in London. Some kinds of cheese made in Normandy are known in all leading countries.

Scenes like those in Figures 55 and 56 are common in Normandy. In the background at the left in Figure 55 is an apple orchard. Such orchards dot the countryside, which is most attractive in apple-blossom time. Tall poplar trees like those that rise against the sky in Figure 55 may be seen almost anywhere. Mile after mile, they stand along many of the roads. Thick hedgerows of bushes and trees also border many roads and fields, as in Figure 56.

These two pictures show ways of farming that are general in Normandy. Farmers still use horses or oxen to pull their machinery, as shown in Figure 56. Much of the machinery is old-fashioned. Some farmers still cut wheat with cradles and tie it into bundles with straw, just as their ancestors did. Farm work in most of France could be much more modern.

Brittany. France reaches farthest west in the broad peninsula of Brittany (Fig. 54). Brittany is not a fertile region. In the centre there are wooded hills and wind-swept moorlands, with belts of lowland between them. Most of the lower land borders the coast. The coast itself is rocky in most places, and lined with small islands. Between the many headlands that jut into the sea all round the peninsula there are little bays. Many of the bays form quiet harbors.

Fishermen of Brittany. With much poor land and numerous good harbors on both



© Rapho-Guillumette

Figure 55. Springtime in Normandy

the English Channel and the Atlantic Ocean, many people in Brittany have always looked to the sea for a living. The sailors of Brittany have few equals. Many have helped to man the French navy and merchant fleet. Indeed, most of the seamen of France come from Brittany. The French navy has a great base near the end of the peninsula. Many Bretons, as the people of Brittany are called, are fishermen.

Hardy fishermen from the ports of Brittany visit many fishing grounds, both near and far. Some catch herring in the North Sea. Others take cod on the Grand Banks of Newfoundland. Bretons were among the first Europeans to undertake fishing voyages to the Grand Banks, at the opening of the 16th century. Still other Breton fishermen bring in tasty tuna fish and countless sardines from waters near home. Fishing provides much work on shore, of course, for women as well as for men.

The quaint villages from which the fishermen go to sea attract artists and other visitors. Many of the boats have orange-brown sails



Figure 56. Harvest time in Normandy

© Screen Traveler, from Gendreau

and blue nets. Many of the old-fashioned, weather-beaten buildings have red roofs. The scene is full of color. The people tell of storms and shipwrecks at sea, of good trips and bad trips. With all their changing luck, they love the sea. They know no other life.

Figure 57 shows part of the harbor and water front of one of the more famous of the old fishing villages of Brittany. This village faces the Atlantic, as the name of the hotel suggests, on the south side of the peninsula. It is easy to understand that this is a place favored by artists.

Farming in Brittany. Farming in Brittany, long an isolated corner of France, was helped by the coming of railroads and the improvement of other roads. Much woodland was cleared and turned into pastures and cultivated fields. There are now many dairy farms. The moist, rather even climate means good pastures. Root crops, potatoes, and oats are leading products. The farmers do not grow much wheat. Brittany is the wettest part of France outside the high mountains (Fig. 58). Rain may fall at any time, but

most of it comes in winter. The summers are cool, and the winters mild. Wheat is the leading crop farther east, where it is drier and sunnier.

On the coastal lowland of Brittany little truck farms, or truck gardens, are worked with much care. From ports on the north coast early potatoes, onions and other vegetables, and strawberries are sent to England.

The farm people of Brittany, as well as the fisher folk, cling fondly to old customs. Some of the country people do not understand French. They still speak an older language, called Breton.

The western plain. South of Brittany, a long plain borders the sea (Fig. 54). It is crossed by several rivers that rise in neighboring highlands. There are few harbors along the coast. The southern part of the coast is lined with sand dunes. Behind the dunes, there are marshes and shallow lakes. To keep the sand from blowing inland, many pine trees were planted years ago. They now form a forest belt 150 miles long, from which timber and resin are obtained.



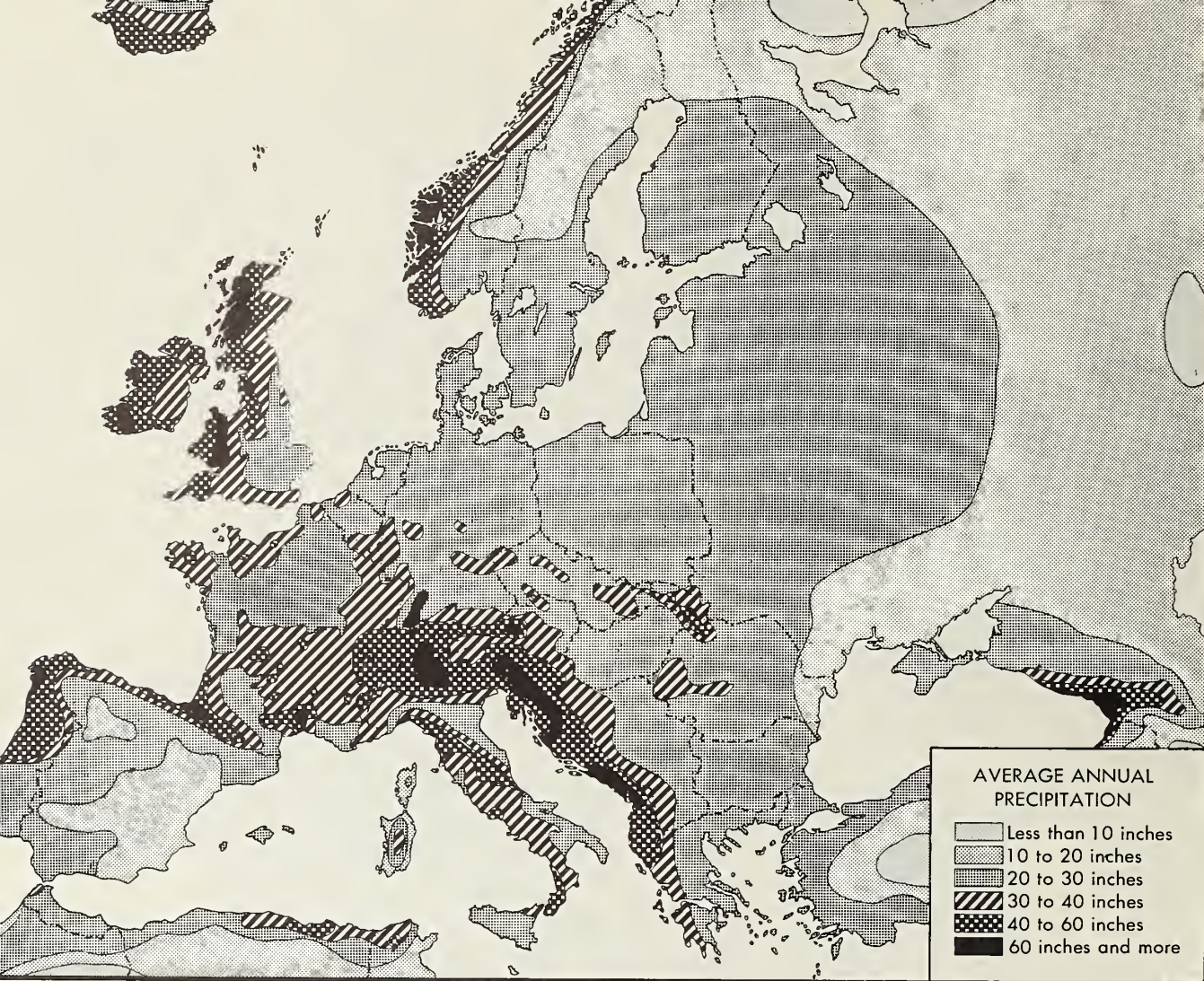


Figure 58. Distribution of rainfall

One would not expect to find any big city on such a coast. The two largest port cities of the plain are some distance inland on the two largest rivers, at the head of ocean navigation. They are Bordeaux on the Garonne River (Fig. 54), and Nantes on the Loire River. The Loire, longest river of France, is swift and shallow and hard to navigate. Deposits by the river near its mouth hurt the trade of Nantes. A ship canal was dug to keep the city in touch with the sea. Both Bordeaux and Nantes have many industries. These industries include shipbuilding, the manufacture of flour, and the refining of sugar.

The farmers of the western plain grow

many crops—wheat and oats, rye and corn, vegetables and sugar beets. In general, the soils are good. The rainfall is moderate (Fig. 58). The winters, especially at the south, are mild, the summers hot.

Near Bordeaux there are great numbers of vineyards. The grapes are used for making wine. Much of the wine is shipped from Bordeaux, long the chief wine port of France. The wine cellars at the riverside are one of the sights of the city. Many people in Bordeaux make casks, bottles, corks, and other things used in the wine business.

The people in Figure 59 are harvesting wine grapes near Bordeaux. Similar pictures could be taken in other parts of France that



Figure 59. A sunny harvest day in the vineyards

© H. Armstrong Roberts

are famous for various kinds of wine. France uses more land for vineyards than for any crops except wheat, oats, and potatoes. French farmers almost everywhere use sturdy, high-wheeled carts in their work, much like the cart in the picture.

To the Mediterranean. From the city of Toulouse on the upper Garonne River, a passageway leads southeastward, between the end of the Central Plateau and the foothills of the Pyrenees Mountains (Figs. 54 and 60), to the Mediterranean coast. Toulouse serves a large area. It is an old city, rich in historic buildings.

Some 60 miles southeast of Toulouse, at a narrow place in the passageway, strong fortifications were begun 14 centuries ago. From then till now, the passageway has been important. It is used today by highway, canal, and railroad.

Along the Mediterranean coast. The eastern part of the southern coast of France is

one of the world's more famous playgrounds. It is the French Riviera (Fig. 54). This is a lovely strip of high hills and blue sea, of palms and flowers, of rocky cliffs and countless coves and bays. The Riviera is shut in by mountains (Fig. 60). It has a very mild climate. Many winter days are bright and warm, even though winter is the rainy season. A score or more of pleasure resorts line the coast. Each winter they attract many tourists, seeking pleasure, the mild climate, rest, or health.

The largest resort city of the Riviera is Nice, partly shown in Figure 61. From November to May it is crowded with visitors from London and Paris, from other places in Europe, and from America. An annual carnival is held, with parades and bands and confetti. On the boulevard that skirts the shore in the picture a Battle of Flowers is staged. There are plenty of flowers to throw, for country people near the city grow great

[illegible][illegible]

WESTERN EUROPE

Miles
0 100 200 300

SYMBOLS FOR CITIES

- More than 1,000,000
- 500,000 to 1,000,000
- 100,000 to 500,000
- Other Selected Cities
- ☉ Capitals

Principal Railroads

Canals

ELEVATION IN FEET

- More than 10,000
- 5,000 to 10,000
- 2,000 to 5,000
- 1,000 to 2,000
- 500 to 1,000
- Sea Level to 500
- Below Sea Level

The map shows the following geographical features and locations:

- Oceans and Seas:** Arctic Ocean, Atlantic Ocean, North Sea, Baltic Sea, Mediterranean Sea, Aegean Sea, White Sea.
- Islands:** Iceland, Shetland Is., Faroe Is., Hebrides, Orkney Is., British Isles, Ireland, Jersey, Guernsey, Channel Islands, Azores, Madeira, Canary Is., Sicily, Sardinia, Corsica, Balearic Is., Crete.
- Mountains:** Pyrenees, Alps, Apennines, Carpathians, Balkans, Caucasus, Atlas, Tiber, etc.
- Major Cities:** London, Paris, Berlin, Rome, Moscow, Leningrad, Warsaw, Prague, Vienna, Budapest, Bucharest, Athens, etc.
- Canals:** English Channel, Dover Strait, Kiel Canal, Suez Canal, etc.
- Other Features:** Arctic Circle, Tropic of Cancer, Strait of Gibraltar, Bay of Biscay, etc.

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- WESTERN EUROPE**
- Miles
0 100 200 300
- SYMBOLS FOR CITIES**
- More than 1,000,000
 - 500,000 to 1,000,000
 - 100,000 to 500,000
 - Other Selected Cities
 - ☉ Capitals
- Principal Railroads**
- Canals**
- ELEVATION IN FEET**
- More than 10,000
 - 5,000 to 10,000
 - 2,000 to 5,000
 - 1,000 to 2,000
 - 500 to 1,000
 - Sea Level to 500
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 - Mountains:** Pyrenees, Alps, Apennines, Carpathians, Balkans, Caucasus, Atlas, Tiber, etc.
 - Major Cities:** London, Paris, Berlin, Rome, Moscow, Leningrad, Warsaw, Prague, Vienna, Budapest, Bucharest, Athens, etc.
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 - Other Features:** Arctic Circle, Tropic of Cancer, Strait of Gibraltar, Bay of Biscay, etc.

WESTERN EUROPE

Miles
0 100 200 300

SYMBOLS FOR CITIES

- More than 1,000,000
- 500,000 to 1,000,000
- 100,000 to 500,000
- Other Selected Cities
- ☉ Capitals

Principal Railroads

Canals

ELEVATION IN FEET

- More than 10,000
- 5,000 to 10,000
- 2,000 to 5,000
- 1,000 to 2,000
- 500 to 1,000
- Sea Level to 500
- Below Sea Level

The map shows the following geographical features and locations:

- Oceans and Seas:** Arctic Ocean, Atlantic Ocean, North Sea, Baltic Sea, Mediterranean Sea, Aegean Sea, White Sea.
- Islands and Archipelagos:** Iceland, Shetland Is., Faroe Is., Hebrides, Orkney Is., British Isles, Azores, Madeira, Canary Is., Azores, Madeira, Canary Is., Azores, Madeira, Canary Is.
- Coastal Features:** English Channel, Strait of Dover, Bay of Biscay, Bay of Cadiz, Strait of Gibraltar, Strait of Messina, Strait of Otranto, Strait of Bonifacio, Strait of Messina, Strait of Otranto, Strait of Bonifacio.
- Major Cities:** London, Paris, Berlin, Rome, Madrid, Barcelona, Lyon, Geneva, Zurich, Milan, Vienna, Prague, Warsaw, Krakow, Budapest, Bucharest, Sofia, Athens, Istanbul, Ankara, Algiers, Tunis, Tripoli, Casablanca, Rabat, Marrakech, Oujda, Fez, Tangier, Agadir, Casablanca, Rabat, Marrakech, Oujda, Fez, Tangier, Agadir.
- Topography:** Pyrenees, Alps, Apennines, Carpathians, Balkans, Caucasus, Iberian Peninsula, British Isles, Scandinavia, Fennoscandia, Baltica, East Europe, West Europe, Central Europe, South Europe, North Europe, East Europe, West Europe, Central Europe, South Europe, North Europe.

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Figure 61. A famous playground

Figure 62. When work is play



quantities of roses, marguerites, sweet peas, hyacinths, and other flowers. Nice has a famous race course, tennis courts where international matches are held, and many other attractions. It is called the "City of Pleasure."

The gay life of Nice and the other resorts was stopped by the war, of course, but it has been taken up again. The scenery and the climate are lasting resources.

In many places along the southern coast, from end to end, there are olive orchards, orange groves, and vineyards. The woman and children in Figure 62 are picking up olives. French women and children help in many kinds of outdoor work.

Marseille. Near the middle of the southern coast is the great port of Marseille, second largest city of France. The map in Figure 60 shows that Marseille is not at the mouth of the Rhone River. The map shows, too, that the Rhone Valley, between highlands on both sides, forms an easy way into the country from the south. Why, then, is the port not on the river?

The explanation is simple. The river has made a big delta. The delta is very low. Much of it is marshy. Few people live on the delta, except near the northern end. Elsewhere, the delta land is used mainly for pasture. The river channels in the delta are shallow and shifting. Many years ago canals were built from the sea to the river some distance inland, but large ships cannot enter. Marseille is about 30 miles east of the river, at the nearest place that was favorable for a city. It has a large, deep harbor. Connection with the river and valley, near the head of the delta, is made by rail.

Marseille is the chief port of France for its trade with North Africa, the Eastern Mediterranean, and the Far East. Some 40 miles southeast of Marseille, on another good harbor, there is a big naval station and fortress. The fleet that operated from this base had the duty of guarding French ship-

ping in the Mediterranean. Units of the fleet were scuttled during the war. The home of the fleet and Marseille, the centre of shipping, were close together.

Marseille has industries of many sorts, but more soap factories than any other kind. The waste from olive-oil mills is used in the soap factories. Marseille also imports oil-bearing nuts and seeds for making soap. Some of the flowers grown along the southern coast are used to make perfumes. Some of these perfumes are used in Marseille in making scented soap.

The Rhone-Saône Valley. From ancient times till now the lower valley of the Rhone River and the valley of the Saône (Figs. 54 and 60), the main branch of the Rhone, have played a big part in the life of France. Greek civilization and Roman civilization moved into France along this natural highway. Some Roman buildings are still standing in the lower Rhone Valley. Time and again the valley highway has been used by invading and defending armies.

Lyon, third largest city of France today, stands at the junction of the Rhone and Saône (Fig. 60). The main railroad between Paris and Marseille, the two largest cities of the country, runs along the valley lowland through Lyon. Barges and steamboats carry a large traffic on the two rivers. The Saône is connected by canals with the Rhine River, flowing to the North Sea; the Seine, flowing to the English Channel; and the Loire, flowing to the Atlantic Ocean.

On the floors and sides of these historic valleys there are many towns and villages, and countless small farms. Wheat and grapes are leading crops. So much valuable wine is made from grapes grown on the steep western side of the lower Saône Valley that it is called the Cliff of Gold. South of Lyon there are many mulberry trees. The leaves of the trees are used to feed silkworms raised by the farm women. Still farther south, olive trees replace the mulberry trees.



Figure 63. Snowbound

© French Press and Information Service

Lyon is called the silk city. It is widely known for the high quality and fine designs of its silk fabrics. Silk has been woven at Lyon for centuries. The art of weaving the silk has been handed down from one generation of workers to another. When, long ago, the local supplies of raw silk could no longer meet the demand, Lyon began to import silk from other countries. Much of it came from Japan and China, through the port of Marseille.

On the Central Plateau. Between the Rhone-Saône Valley and the lowlands of western France there is a large plateau (Figs. 54 and 66). As we should expect, most of the farms and towns of the plateau are in the valleys.

The best soils are in the broader valleys, in the northern part of the plateau. The

farmers grow grain, potatoes, and sugar beets, and have orchards and vineyards on the lower slopes.

The poorest part of the plateau is the southwestern border. There the streams have cut deep, narrow valleys in porous rocks. These rocks dry out quickly after rains. The people have bands of sheep and goats which they pasture on the stony slopes above the little villages on the valley floors. There are big, cool caves in the porous rocks. In these caves the people make Roquefort cheese from the milk of their sheep and goats.

The higher parts of the plateau, only partly wooded, are used chiefly as summer pastures for sheep. The sheep are wintered in the neighboring valleys and plains.

Little coal fields are scattered about the Central Plateau. Each field has its local in-



Figure 64. Heavy industry

dustries. Metal works and textile factories are common. On one of the coal fields a large city has developed, the city of St. Etienne (Fig. 60). It has many manufacturing plants, including big steel works that use local coal and iron ore. The surrounding hills are covered with smokestacks. Manufacturers in Lyon, not far away (Fig. 60), also use coal from the St. Etienne coal field.

In the French Alps. The village in Figure 63 is in the French Alps (Fig. 60). It was early winter when the picture was taken. The villagers were snowbound. Outside work was impossible. The people were making Christmas toys in their homes. There are many such villages, surrounded by towering mountain peaks, in southeastern France. In most of them there are skilful toy makers. The toys from these villages find their way throughout France, to fill Christmas stockings and nursery play boxes. In summer, the mountain people cultivate small fields on the valley floors, near their homes.

Besides the villages, there are towns, and even cities, in the mountains. Some are resorts to which tourists go for skiing or mountain climbing, or perhaps just to rest and enjoy the scenery. The Alps are a scenic wonderland which is at its best, many people think, in June.

The largest city in the mountains of southeastern France is Grenoble (Fig. 60). It has been known for centuries as the glove city of France. At first, the skins of goats that roamed the mountainsides provided the leather that was used by the glove makers. After a time, the local supply was not enough. Leather from distant places was used. But even now the glove makers do much of the work in their homes, not in factories. Grenoble has other industries, among them the manufacture of machinery for power plants.

One of the greater resources of the mountains, near Grenoble and elsewhere, is water power. Precipitation is heavy in the high mountains (Fig. 58). The swift mountain

streams have many waterfalls and rapids where electric power can be developed. Doubtless this will be done more and more, especially because France does not mine enough coal for its mills and factories. Much coal has been imported.

Lorraine. Much more coal than iron ore is used in making iron and steel products. So it is common practice to move iron ore to coal, not coal to iron ore. We saw examples of this practice in studying Britain (pp. 34, 35). An exception is found in the iron and steel industry of Lorraine (Fig. 54).

Lorraine has huge deposits of iron ore, but lacks coal. The ore is not of high quality. It would not pay to ship it as far as much high-grade ore is shipped. Fortunately, the ore of Lorraine is not only abundant, but also easy and cheap to mine. This has helped to offset its low quality. The ore is smelted near the mines. Coal and coke are brought

from western Germany and from a coal field in northeastern France, on the border of Belgium.

Figure 64 is part of a steel plant near Nancy, largest city of Lorraine. In other places, north of Nancy, there also are blast furnaces in which iron ore is smelted, and steel mills in which crude iron is made into sheets, plates, and other heavy products. Iron, steel, and their products are not the only things made by Nancy and its neighbors. For instance, many places have cotton mills. This is a busy manufacturing district.

Lorraine is a hilly land. In places there are mountains, as the picture below suggests. The mountains are forested. The summer climate is hot and sunny, and there is a fair amount of rain (Fig. 58). Much snow falls in winter. The soils are fertile on many valley bottoms and gentle slopes. Grain fields, meadows, orchards, and vine-

[83]

Figure 65. "Lawnning the linen"

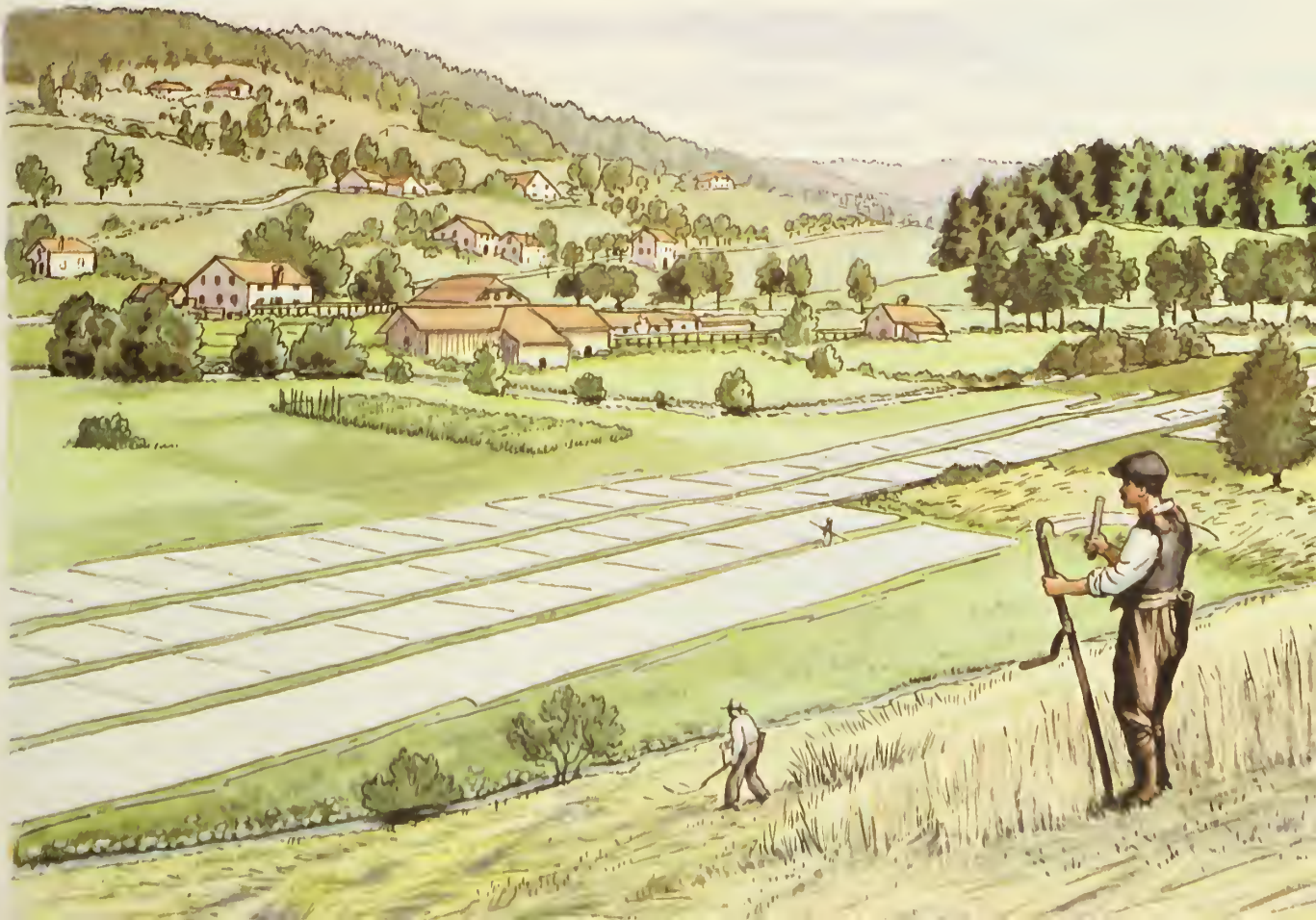




Figure 66. Distribution of population

yards surround the towns and villages. The northern limit for vineyards is in Lorraine.

Figure 65 is a view in the edge of the Vosges Mountains (Fig. 60), southeast of Nancy. The white strips in the foreground are strips of linen bleaching in the sun. The cloth is left on the ground for several days. This is called "lawning the linen."

Northeastern France. The corner of France that borders Belgium and includes the plain of Flanders (Fig. 54) is a small region of much importance. It is the leading coal-mining area of the country. Partly for that reason, it is a great manufacturing area. It is also a very good farming area. With manufacturing and farming highly de-

veloped, it has a dense population (Fig. 66).

Deep mines and manufacturing plants that use much coal or coke are close together in groups scattered over the coal field. Among these plants are factories making machinery, tools, hardware, and other steel products; glass and pottery works; and chemical plants. There are many busy mining and manufacturing towns, but few large cities.

The largest city of the region is Lille (Fig. 60), a centre of the textile industry. Lille itself has big cotton and linen mills. It makes much clothing. Roubaix (Fig. 60), near Lille, leads in woollen goods. This is an old, old industry.

Several things besides local coal have

helped manufacturing in this crowded corner of France. There are excellent means of transportation, by rail and canal and road. There is an abundant supply of labor, drawn partly from near-by Belgium. In general, this labor has been cheap labor. The surrounding farms have supplied raw materials, such as flax and sugar beets, used by some of the mills. The leading manufactured products reach markets throughout France, and in the French lands overseas.

Farming differs from place to place, even though the region is small. Most farmers grow sugar beets and wheat as leading crops. Potatoes, beans, flax, and hops are also important crops. Many farmers have rich meadows, and keep dairy cows. Trees border the fields, line the roads and canals (Fig. 67), and surround the brick farmhouses. This is a bright and smiling land, except near the coal mines and the smoky factories.

The Paris Basin. The layers of rock below the plains that surround Paris are not level. Nearly flat near Paris, they are tilted upwards far from the city. Where the harder layers come to the surface, they form low,

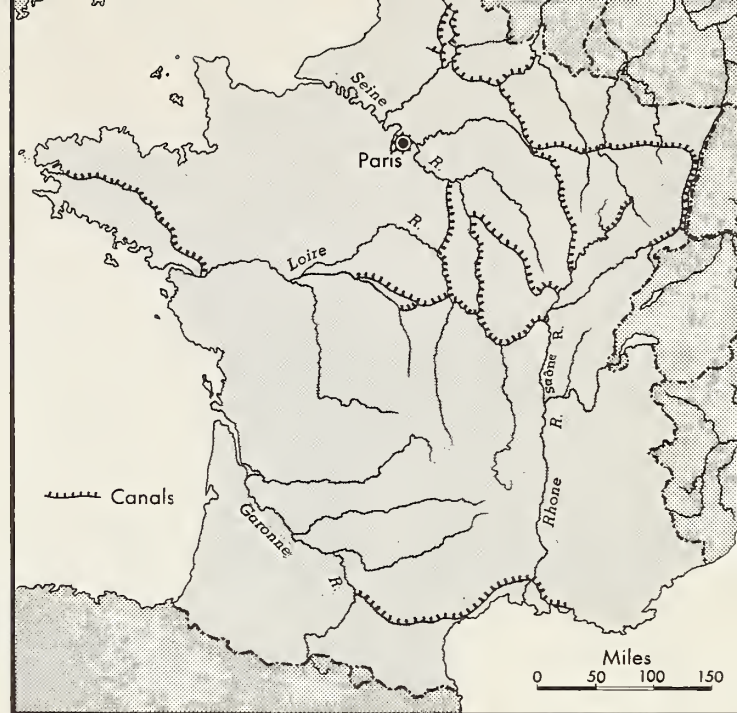


Figure 67. Main canals of France

curving ridges. These ridges outline a large lowland which is called the Paris Basin (Fig. 54). On the east, the rim of the basin is distinct. On the west, the rim is much lower. In some places, it is so low that it is hard to recognize. The picture below was taken in the Basin, near Paris.

[85]

Figure 68. Spinach for the Paris market

© Ewing Galloway





Figure 69. Looking up the Seine, in Paris

Southwest of Paris in the basin, there are broad plains and wide valleys which are very fertile. In one large area there, called the granary of France, much land is used for wheat. The homes of the farmers are grouped in villages. All the fertile land is used for crops. Where there is poor land, it is used for grazing sheep or cattle. After the harvest, sheep are turned into the stubble fields.

Southeast of Paris, there are fertile strips along the streams, but much of the land is poor. Large stretches of waste land have been covered with pine forests. In Champagne (Fig. 54), the sunny slopes of the hard-rock ridges are used for vineyards. From the grapes of these vineyards, the famous wines of Champagne are made.

Close to Paris, too, the use of land varies

greatly, chiefly because the soils differ greatly. Some patches of poor land have been kept under forest. In the rich bottoms of the valleys there are many truck farms. The women in Figure 68 are at work on a truck farm near the city, picking spinach.

One united country. As we have seen, there are strong differences between the regions of France. A longer description of them would show more differences. None of the regions is like any other in all ways. France is a country of contrasts. It was the first modern country on the continent of Europe, however, to become firmly united.

Among the things that helped to unite France were the easy natural routes connecting different regions. No region was shut off from the others by difficult barriers. Only Brittany was a land apart, untouched

in early times by a connecting land route.

Today, rivers that have been improved for navigation and barge canals join most parts of France. Figure 67 shows the main canals. Modern roads and railroads also bind the regions together. Figure 60 shows the main railroads. Of course, there are many more railroad lines. The map shows, too, how the main railroads lead to Paris, capital and heart of the country. In many ways the life of France centres in this great city. That has helped very much to bind all the different regions, so unlike one another, into one country.

Paris. Greater Paris, made up of Paris and its suburbs, has a population of nearly five million. Paris is one of the largest four cities on the mainland of Europe. All the important business of the French government is carried on in Paris. In some years, it has been the busiest port in France. It is always the busiest railroad centre in the country, the first city in commerce, industry, and banking.

Paris is a city of great charm, as suggested by Figure 69. In many years it is visited by more tourists than any other city in the world. They come for many reasons, from many lands. Paris is rich in historic treasures, and in places of world-wide interest. It has many beautiful buildings. It is a great centre of art and music, of science and education. It is also one of the leading fashion centres of the world. Only in recent years has it had any rivals in setting fashions.

Before World War II began, more than a million people in Greater Paris were employed in manufacturing. This may seem surprising, for there are no deposits of coal near the city. Nor are there large local supplies of raw materials. As these things were lacking, Paris began to specialize long ago in making goods that needed more hand work and less raw material than required in most industries. It owes much to the skill of its expert workers.



Figure 70. A sidewalk café

Most important of the industries is the designing and making of women's clothing. The designers, dressmakers, milliners, and makers of other items of women's wear, number many thousands. There are thousands of workers in leather who make purses, handbags, card cases, and such things. Other thousands make jewelry, artificial flowers, trimmings, and so on. Many of the world's dealers in women's clothing send their buyers to Paris several times a year to bring home goods that are in the latest fashion. The women in the picture above may be buyers.

Paris and its suburbs make countless products, most of them *finished* products. They range from automobiles to delicate surgical instruments, from printing presses to dainty stationery, from farm implements to toys. The unfinished products of mills and factories in many other places are used.

The coal needed for power and heat is brought from Britain or from the mines of northern France (p. 84).

Two pictures. Figure 69 is a view in Paris, looking eastward up the Seine. Part of the spire of Notre Dame, the great cathedral of Paris, shows along the right-hand edge of the picture. The cathedral is on the upper end of an island in the river. It was on this island that Paris began as a small trading centre, a village of boatmen and fishermen. It was a good place for trade. The village spread from the island to both banks of the river.

Paris, growing steadily, became in time a city, and the capital of France. It was the best place for the capital. True, it was not near the centre of the country. But it could be reached from all parts of the country more easily than any other place.

Railroads did much, of course, to help the later growth of Paris. Without railroads, no city could reach such size.

One may guess that some of the people sitting at the tables of the sidewalk café in Figure 70 are Canadians. Many people from Canada and the United States go to Paris, and this is a pleasant spot to stop and rest. Canadians, whether or not they have visited France, and Frenchmen, whether or not they have visited our own land, should realize that each country owes much to the other, that both countries have many common interests.

A time of challenge. France suffered greatly from World War II. Her armies were quickly crushed by the German invaders. Paris was given up without a fight, and so escaped great damage. Eight days later an armistice was signed. The French were forced to disarm. The Germans occupied three-fifths of France. Later, they took over control of the rest of the country. All France was helpless until liberated by the Allied armies.

The war over, France tried, not too hard,

to regain its feet, to restore its usual life. The country was like a man who is slowly getting back his health after a serious illness. A new constitution was adopted in 1946, but was replaced in 1958 by another that set up the Fifth Republic. Farming, manufacturing, trade, transportation, and mining all had to work their way back to former levels. They are doing even more, for France wishes to be ready to take the place in the world of tomorrow which the resources of the country and the abilities of her people make possible. And their efforts are not lagging.

Above most else, France wants security from another invasion from the east. Part of the eastern boundary of the country is naturally strong. Part of it is very weak. The map in Figure 60 makes this clear. At the south, the Alps separate France from Italy and Switzerland, forming a great barrier. Farther north, the Rhine River is the boundary line between France and Germany. It has always been a dangerous line.

A large area west of the Rhine was taken from France by Germany at the end of a war between the two countries in 1870-71. France got the area back at the close of World War I. The river was again the boundary. Between the two world wars, France built a line of powerful fortifications, known as the Maginot Line, west of the river all the way from Switzerland to Belgium.

The Maginot Line proved useless. In 1940, German armies swept through Belgium into France, north of the line, by way of the open northern plain (Fig. 60). It was the same route, in general, that German armies had followed in World War I. This has always been the weakest and most dangerous border of France.

No country can any longer find security in natural barriers, whether oceans or mountains, or in fixed fortifications. Nuclear missiles have made this so. France, and other countries as well, can find security only through the prevention of war.

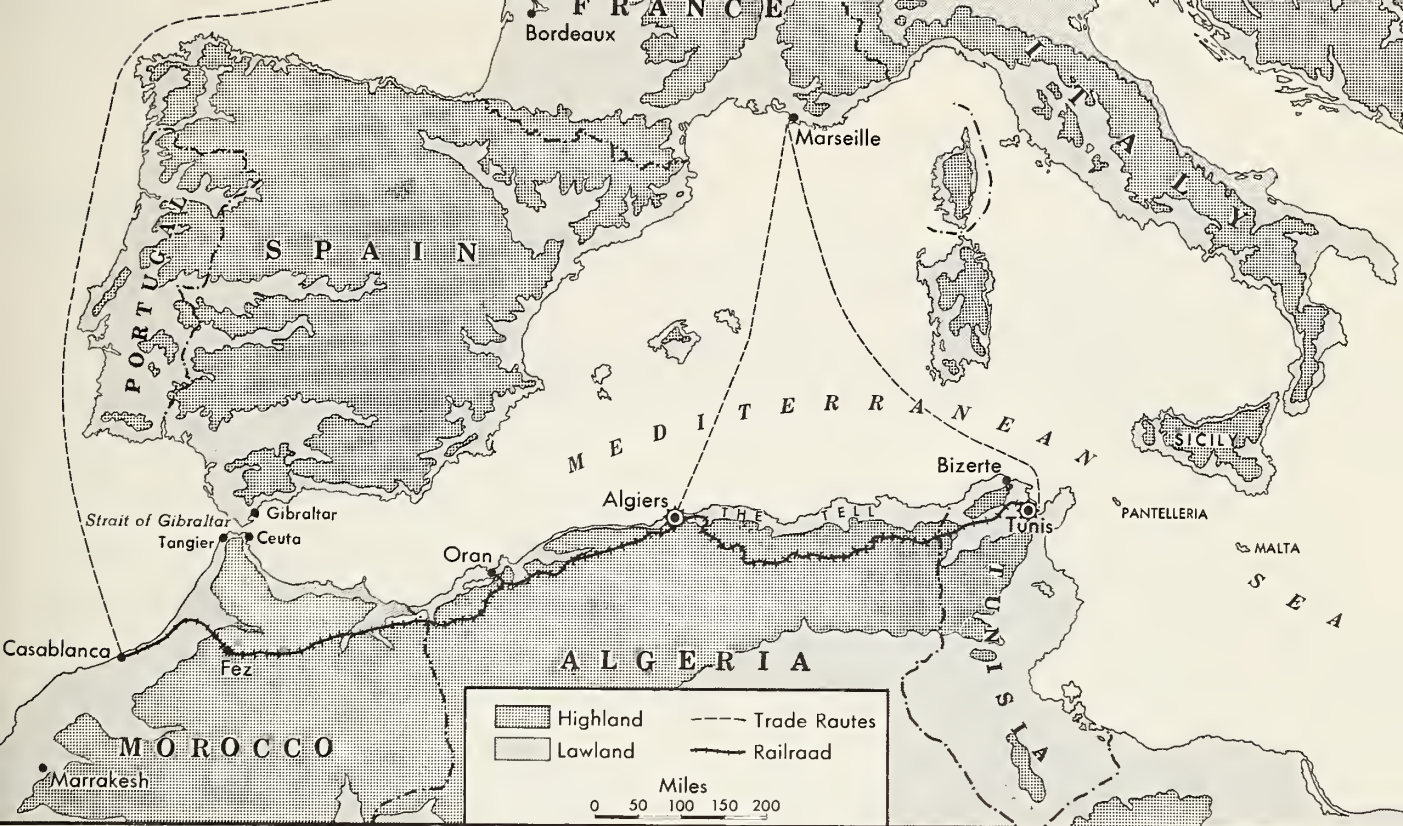


Figure 71. North Africa

Helps in Learning

1. What are the more thickly settled parts of France (Fig. 66)? The parts that are least thickly settled? What have you learned that helps to explain the differences?

2. Which is the most important region of France? Why?

3. Tell all the ways you can in which life and work are different in the northwestern and southeastern corners of France. Give all the reasons you can for the differences.

4. France is a great bread-eating country. You found wheat mentioned among the crops of what regions? Perhaps you may need to check your memory.

5. The network of French canals is thickest in the northeast (Fig. 67). Give reasons.

6. Name the city of France referred to in each of the following:

- (a) The glove city.
- (b) The city of pleasure.
- (c) The silk city.
- (d) The Manchester of France.

7. It has been said that Paris is to France what London is to England. What do you think about this statement?

8. What great differences can you name between the ways in which people in France and in Britain live?

9. From France itself we now turn to its influence in Africa. We already read that France has vast lands in Africa (p. 14). The most important of its former possessions in North Africa were Tunisia, Algeria, and Morocco. Of these, only Algeria is French today.

(a) Do you think the nearness to France of these three lands helps to make them important? If so, why?

(b) Do you think that some crops that are common in southern France may be grown also in these lands? If so, why?

(c) What reason can you suggest for the fact that all the larger cities of these related lands are seaports?

Check your answers as you read the following pages.



Figure 72. Looking toward Algiers

Figure 73. Looking seaward from Algiers



French Influence in Africa

North Africa

The lands. Great changes have occurred in the French empire. At one time, France's North African lands were her most important possessions. The sovereign kingdom of Morocco has been independent of France since 1956 and includes that bit of territory that was once Spanish. Tunisia achieved her independence in the same year. Algeria, which is presently the scene of great uprisings, is the last French colony in North Africa.

In Algeria and northern Tunisia there is a narrow belt of rather low land along the sea (Figs. 7 and 71). This coastal belt is made up of hills and valleys and small plains. It is called the Tell. This odd name is the Arabic word for "hill." On the hills of the Tell there are forests of oak, chestnut, and pine. The plains and valleys are well-watered and fertile farm lands. This is the best part of North Africa.

Back of the Tell there is a broad plateau, higher than most of our hills except the Rockies. Part of it lies between chains of the Atlas Mountains (Figs. 7 and 71). The plateau is very unlike the coastal belt. The rainfall is lighter (Fig. 30), the summers are hotter, the winters colder, and the soils poorer. Much of the land is used for grazing, rather than farming.

In Morocco, as in the other lands, there are plains, plateaus, and mountains. The Atlas Mountains reach their greatest height, nearly 15,000 feet, in Morocco. The tallest peak is as high as the tallest mountains in the Rockies. The large lowland between the ocean and the mountains (Figs. 7 and 71) is the richest part of the country. It is used for farming, where there is water enough, and for grazing.

South of the Atlas Mountains is the northern border of the Sahara, a grim desert, about half the size of Canada. The change to the desert is sudden. Sometimes it is said that the Atlas Mountains form the southern boundary of Europe. By this it is meant that north of the mountains there is much to remind one of southern Europe, while south of the mountains the lands and the peoples are very different.

The people. So far as is known, a people called Berbers were the first settlers in the lands between the Atlas Mountains and the sea. Their descendants live there today. Other people called the northern coast the Barbary Coast, after the Berbers.

Early Phoenicians and Greeks founded colonies on the Barbary Coast (p. 6). Later, the Romans conquered and occupied the land.

In the seventh century, Arabs from the East poured through the passes of the Atlas Mountains into the Tell. Many Arab settlers followed. In time, many Arabs pushed on into Morocco and settled there. The Moors, found today in all three of these related lands, are a blend of Arabs and Berbers.

Moorish armies crossed the Strait of Gibraltar and conquered Spain. There for some centuries a Moorish civilization flourished. It was the Spaniards who gave these mixed people the name Moors. Driven at last from Spain in 1492, the year Columbus discovered America, the Moors held their power in Morocco. Under their rule, Morocco remained a closed and almost unknown country until it was taken over by the French some 40 years ago.

Many Europeans settled in the Tell long before the French took Morocco. Most of them are French, but in Tunisia there are

almost as many Italian settlers as French settlers. The nearness of Tunisia to southern Italy helps to explain the many Italian settlers.

Today, all the people of Tunisia, Algeria, and Morocco number nearly 22 million. Nearly a million and a half are Europeans. The population, resources, and location of these lands, close to Europe, make them very important. Their trade with France is large. They export raw materials, and import manufactured goods. Their seaports are doorways, of course, through which this trade flows in and out.

Algiers. The French won their first foothold on the Barbary Coast when they captured Algiers (Fig. 71), the chief stronghold of the pirates (p. 14). Algiers is the largest city of Barbary, and the capital of Algeria. It is really two cities. The new French town and the old native town are very different in every way.

The new town is partly shown in Figures 72 and 73. It might be a copy of some city in France. Its modern buildings and wide boulevards seem to belong to Europe, not to Africa. Most of the people are Europeans.

Behind this busy modern city, that fills the level ground along the seashore and covers the lower slopes of the surrounding hills, is the old native town. It has steep and crooked streets, too narrow for vehicles, and solid rows of stone houses. The houses have bare walls facing the streets, except for dark doorways and slits that take the place of windows. The streets and shops of the native town, often crowded with Moors, Arabs, and other people, are the most interesting sight in Algiers for tourists. Algiers is a popular winter resort for tourists.

Algiers might be called the Marseille of French Africa. The view in Figure 73 is a common scene on the water front. Most of the ships in the basin fly the flag of France. Probably they came from Marseille. The

docks are crowded with freight. The scene suggests the lively trade of the city.

Tunis and Oran. The Barbary Coast has two other large seaport cities. One of them is Tunis, capital of Tunisia. The other is Oran. Both are shown in Figure 71.

Tunis is on an isthmus, between two salt lakes. It is connected with the Mediterranean by a deep ship canal about six miles long. Like Algiers, Tunis is two cities in one. First, there is the modern part, in the French style. Here there are apartment houses, public buildings, shops, banks, theatres, open-air cafés, and wide boulevards. Second, there is the old, native part. Here are winding streets and dead-end alleys, a host of crowded, flat-topped houses, and many native bazaars.

Here and there in the native town minarets rise above the other buildings. A minaret is a tower or turret on a mosque, and a mosque is a place of worship for followers of Mohammed. From a balcony on a minaret a crier calls the faithful to prayer. There are two mosques with minarets in Figure 74, one to the left of the street, the other in the distance.

Tunis, unlike Algiers, is more Oriental than European. Strange sights and sounds greet visitors to the native section. They may see hundreds of camels, bringing charcoal to market. They can watch snake-charmers. They can listen to Moorish storytellers. They can visit the bazaars for which Tunis is famous.

The bazaars cover a large area of very narrow streets. Each street is used for trade of one kind—for jewelry, perfumes, saddlery, or something else. The street used by jewellers was once a slave market. The shops are little stalls. The fronts of the shops are open by day, and closed at night with stout, brightly painted shutters. The merchants usually sit cross-legged on the floor, surrounded by their goods. They are experts in all the ways of Oriental bargaining. Some

things are sold out in the streets. A furniture auction is under way in the crowded street in Figure 74.

Oran, unlike both Algiers and Tunis, attracts few travellers. There are few sights to lure them. But Oran is a well-built modern city. It has a fine harbor, long docks with up-to-date equipment, and huge warehouses. It has a large trade.

Casablanca. The chief Atlantic port of North Africa is Casablanca (Fig. 71), a young city in Morocco. It was planned and built by the French. By making a huge break-water, engineers provided a safe harbor on an open coast that always had been dangerous for shipping. Casablanca was laid out on the shore of the harbor. The city, modern in every way, has grown rapidly. It is even larger than Algiers.

All four of the doorway cities, Casablanca, Oran, Algiers, and Tunis, are connected by highway and railroad (Figs. 7 and 71).

Ferry lines and sentinel posts. The map in Figure 71 shows the sea routes that connect North Africa and France. The voyage between Casablanca and Bordeaux is made in three or four days. The trip between Algiers and Marseille takes only one day for a fast boat. The trip between Tunis and Marseille takes only two days. These routes across the western Mediterranean are life lines of French commerce. They cross the British life line through the Mediterranean (p. 15). They have been called "ferry lines."

Of course, the narrow openings or gates by which ships enter or leave the western Mediterranean are very important. The places that control the gates are sentinel posts.

At the eastern gate, Britain has Malta (Fig. 71). Italy has the large island of Sicily and the tiny, fortified island of Pantelleria. France built a great fortress and naval base at Bizerte, not far away (Fig. 71). Bizerte was intended to defeat any plans that Italy might have in Tunisia, with its many Italian



Figure 74. In the old, native part of Tunis © Gendreau

settlers. It was intended also to help guard the French life lines.

For centuries, the British fortifications at Gibraltar controlled the western gate (p. 10). France built a strong naval base at Oran, on the French harbor nearest the Strait of Gibraltar. Doubtless France would have liked to control and fortify Ceuta, opposite Gibraltar (Fig. 71). But Spain, backed by Britain, has held Ceuta though it has lost the rest of Spanish Morocco. Once under international control, Tangier, near the western end of the Strait of Gibraltar, is now also part of the new state of Morocco.

You would hardly think that such a peaceful country, with its Arab shepherds bringing their flocks to market (Fig. 76) and little villages perched high in the hills (Fig. 75), was the scene of bitter fighting during World War II. It was the scene of much



Figure 75. A Berber village on a ridge top

fighting, however. Enemy troops tried to fight their way along the North African coast and into Egypt. Once they had captured Egypt, they would have control of the Suez Canal (Figs. 10 and 12), and they could stop all ships that wanted to go through the Mediterranean Sea to India and the Far East.

Fortunately, the Allied soldiers were able to force the enemy back from Egypt and the rest of North Africa. Many of the enemy surrendered, and the others left African soil.

North Africa is still unsettled. After much resistance, France gave Morocco and Tunis their freedom. The end of Algeria's struggle for independence is not yet in sight.

Farming in the Tell. A Canadian would find in the Tell quaint towns and villages, fertile farms, thrifty vineyards, and fine groves of olive trees and citrus trees. Here there are many European colonists. The Tell is the home of most of the Europeans in North Africa. Most of the natives are Berbers, Arabs, or Moors.

In general, the Berbers are in the hills, the Arabs on the open lands. It was in the hills that the early Berbers were best able to defend themselves against their mounted foes. Many of their villages even now are on hilltops. Others are strung out on ridges between valleys. Such a village is shown in Figure 75. The houses have sloping tiled roofs, like many houses in southern Europe. The houses of the Arabs have flat roofs and inside courts.

Wheat, barley, grapes, olives, and citrus fruits are leading products of the Tell. These are products of all Mediterranean lands that have mild, moist winters, and hot, dry summers. Crops that will not keep long are grown chiefly near the seaport cities. There is a good market in these cities. Then, too, farmers near them are in the best position to ship such products overseas.

Time, as well as place, is important in marketing products. Vegetables are winter crops in the Tell. Those exported to France and Britain arrive when local supplies are



Figure 76. A sheep market in Algeria

© James Sawders

low, and when prices are likely to be high. Potatoes, for instance, begin to arrive by the end of December. Wheat, too, is a winter crop. It is planted in late autumn or early winter, and is harvested in May. Shipments of new wheat to Marseille arrive when there may be a shortage of wheat in France.

Olive orchards are more important in Tunisia than other orchards or vineyards. They extend southward from the Tell, along the coastal plain of Tunisia (Fig. 7), to places where the rainfall is only 10 inches a year (Fig. 30). Much olive oil has been shipped from Tunisia to Marseille, for use in soap works (p. 80).

In the highlands. On the plateau behind the Tell millions of sheep are grazed by native shepherds. Many shepherds live in tents, and move from one pasture to another. Some of them drive their flocks up to the mountain tops in summer, and back to lower levels in winter.

Before the war, great numbers of sheep were shipped to France each year. The sheep

in Figure 76 may have been on their way to France. This is a view of a sheep market at a town on the plateau, in eastern Algeria. The sheep were gathered in bands that probably belonged to different owners. Wool and sheepskins, as well as sheep, are exported from the plateau.

Some land on the plateau is farmed. The main crops are barley and wheat. Barley is a common food of the natives. There are not very many European colonists on the plateau, but the number is increasing. Most of them are grain farmers. Grain is planted on the same land only once in two years, or perhaps twice in three years. The rest of the time the land is left in fallow to store up moisture from the light, uncertain rains.

In Morocco. Compared with Algeria and Tunisia, Morocco is a backward country. This is not surprising when one remembers how long Morocco was a closed country that had very little contact with the outside world (p. 91). The French did much in the short time that they controlled most of the

country. They built towns, highways, and railroads. They made living conditions better in many ways.

Most of the people who live on the plain are both farmers and herdsmen. They have fields of wheat, barley, and beans. Their sheep, goats, and cattle are grazed on pasture lands of coarse, wild grass. The importance of farming and grazing changes from the cooler, moister, northern part of the plain to the hotter, drier, southern part. Farming is more important in the north, grazing in the south.

In many places where wells or streams provide water for irrigation, there are gardens and orchards. Peach, plum, olive, fig, and orange trees are common in the orchards. At the south, date palms appear. Irrigation is necessary there if crops of any kind are to be good and sure.

Many herdsmen pasture their stock in the Atlas Mountains in summer. Some of them spend the winter on the border of the lowland, and there grow barley and wheat. When summer comes, they move into the mountains. They pitch their tents on the bottoms of valleys where they can grow some corn, and graze their animals in the forests on the slopes.

There are Berber villages in the mountains at heights of two miles and more. The people of these villages live mostly on beans and milk. Their livestock is stunted and wiry. They have been robbers at times, when famine threatened.

Morocco has few towns. The chief places, apart from the seaports of Casablanca and Tangier (p. 93), are Fez and Marrakesh (Figs. 7 and 71). Both of these towns were built by early Moorish rulers. The crumbling walls, made for defence, shut in crowded white houses. Arabs in their flowing robes and Berbers in their sheepskins mingle in the narrow, aimless streets. Outside the walls there are gardens, and orchards of orange trees and olive trees.

Around Marrakesh there are thousands of date palms. A strange story is told about them. The trees, so the story runs, grew from the seeds of dates that were eaten by men from the desert, who came to lay siege to the city and camped outside the walls. In any event, Marrakesh is at the end of caravan routes which come through passes in the near-by mountains, from the great desert to the south.

Mineral riches. The lands of North Africa have rich mineral resources, and mining seems sure to increase. Among the deposits already worked are phosphate rock, iron ore, lead, and zinc.

Phosphate rock is used for fertilizer. Much of it is needed in France and other countries of western Europe. The deposits in North Africa are enormous, of high grade, and easily worked. Native labor is cheap. Before World War II, the output was increasing yearly.

Most of the iron ore mined has gone to Britain. Most of the lead ore and zinc ore usually goes to France, where little lead and almost no zinc are mined.

Helps in Learning

1. What can you tell about the people who have settled at different times in the Tell?
2. Algiers has been compared to a diamond, set in an emerald frame. Do you think the view in Figure 72 suggests a reason for the comparison? If so, what reason?
3. What things about the European sections of Algiers and Tunis are alike? What things about the native sections of the two cities are alike?
4. Tell all you can about the "sentinel posts" of the western Mediterranean.
5. Why, do you now think, is the Tell the most productive and valuable part of the lands in North Africa?
6. Do you think France probably wishes to have large manufacturing industries built up in North Africa? Why, or why not?
7. Some things about the northern part of North Africa and the southern part of British



Figure 77. On the way to pastures in the edge of the desert

© Ewing Galloway

South Africa are much alike. What ones can you name? Check back in the book to see if you can find any more.

The Sahara

Mouth of the Sahara. The village in the picture above has a famous name. It is El Kantara. The village got this name from the near-by pass of El Kantara (Fig. 7), in the Atlas Mountains. Part of the mountain wall shows in the background of the picture. The Arabs call the pass the Foun-es-Sahara, which means the "Mouth of the Sahara."

Mountain passes in many lands have been

of great importance in peace and war. No pass in Africa has been more important than El Kantara. It was used by the early Arabs who invaded North Africa (p. 91). It had been guarded long before then by a Roman fortress. Now it is guarded usually by a French garrison. The pass is a gorge, just wide enough for the stream, a highway, and a railroad. The railroad through the pass runs on south in the border of the desert to Tuggurt (Fig. 7).

What the desert is like. One would have to travel far into the Sahara from Tuggurt to see how parts of the desert look, for it is by no means all alike. Some of the land is

below sea level. Some is mountainous. There are plateaus and plains, high peaks and deep gorges, hills, valleys, and basins. There are stony wastes, gravelly wastes, areas covered with soil, and other areas covered with sand dunes. But dunes cover only about one-tenth of the desert.

Of course, it is lack of rain that makes the Sahara a desert. Over most of it the winds blow from the northeast in all seasons. As the winds get nearer and nearer to the equator, they become warmer. As their temperature rises, they can hold more and more moisture. They are drying winds.

Where the desert winds are cooled in any way, as in going over high land, they can hold less moisture. Then clouds may form, and rain may fall. The Tibesti Mountains, Figure 7, get enough rain for trees to grow on the slopes. Streams flow down from these mountains. But the streams are short. They dry up, and disappear in the desert.

Most places in the desert are not totally barren. Along the margins the winds change, and there is a dry season and a season that is less dry. On the southern margin, most rain falls in summer and then some grass grows over wide areas. On the northern margin, most rain comes in winter and for a time there is pasturage in the desert. The children in Figure 77 are driving sheep and goats out from El Kantara to pastures in the edge of the desert.

In many places in the desert there are thorny bushes. Even where ten years or more pass without any rain, each fleeting shower may bring out tiny flowering plants. They quickly sprout, blossom, and die, leaving seeds to await the next shower.

Desert people. Few people live in the Sahara, for so vast an area. This is not surprising. The surprising thing is that all of them can exist there. Wherever there is a trickle of water and some grass, nomads may be camped. They wander from one grazing spot to another when, all too soon, the water

and grass give out. Along the northern and southern fringes of the desert they come in or go out when the changing seasons bring rain or drought. Wherever enough water can be had, there are permanent settlements with irrigated crops and date palms. There is little chance anywhere for more people. The population of the Sahara has long been about as large as it can be.

Life is hard in most of the desert. The clothing commonly worn is loose, for loose clothing is more comfortable in the heat. It also provides a covering which can be drawn over the head during dust storms. Ordinary fuel is scarce, or lacking entirely. The dried manure of camels and other animals may be the only fuel. With little fuel, there is little cooking. Much milk and curd are used. Meat may be air-dried, not cooked. In every way, the desert acts upon the people.

Oases. The more important oases are in the northern border of the desert, not far from rain-catching mountains. Most of them are in valleys that have no streams. Under the floors of the valleys there is water that is reached by wells. Some of the oases are in hollows among dunes, in places where the surface of the water underground is not deep. Some oases get water from springs, and a few from dwindling streams.

Whatever the source, all the oases must have a supply of water for irrigation. Otherwise, they could not exist. In most of them fig, orange, lemon, peach, or apricot trees grow in the shade of date palms. The date palms are most important. Various vegetables and some wheat and barley or millet are grown in many oases.

In each of the larger oases there is a town and a market place where trade at times is lively. Nomads come to get dates, dried fruits, dried vegetables, and perhaps wheat or millet. In exchange, they give sheep, goats, wool, and tanned leather. Sometimes they bring rugs and fabrics made from wool or from the hair of goats. So the settlers in



Figure 78. An oasis in the desert

Courtesy Pan American Airways

the oases and the nomads of the open desert depend more or less on each other. Neither kind of life is wholly independent of the other.

The French have brought the oases at the north much closer to the world beyond the desert. Several railroads from the coast reach into the edge of the Sahara (Fig. 7). An automobile service for passengers and goods operates between the railroads and the larger oasis towns.

Figure 78 is a view of part of an important northern oasis, in Algeria. Some of the date palms stand out like flag poles against the sky. There are fruit trees under the palms. The top of a large building shows on the

right, between the tree trunks. The size of the building suggests that this is a big oasis.

The quiet scene in Figure 78 may change suddenly. At any time a sandstorm may sweep across the oasis. During a bad storm, swirling clouds of dust and sand fill the air. It is choking to breathe. People seek shelter and safety indoors. Serious damage may be done to crops and trees. At best, much sand lodges around the trees and against the houses. After a storm, the sand must be carried away. Life in some oases is a never-ending battle against sand-laden winds.

Crossing the desert. There are historic caravan routes that lead entirely across the Sahara. They follow streamless valleys, cross



Figure 79. Along the Niger River

© Three Lions

lonely plains and plateaus, skirt dunes and rocky hills. Some camping places are in smiling oases. Some are at desert wells, half-hidden by boulders and thorny shrubs. For great distances, supplies of water are far apart. This is a land of thirst. The way by any line is very long and very hard. The trip, with camels, takes several months.

An active trade once moved along these difficult caravan routes. It lasted for centuries. Things from Europe, such as thread, needles, cloth, dyes, and beads, were taken to Timbuktu (Fig. 7), in the southern edge of the desert, or on to trading centres farther south in the western Sudan. Things from central Africa, such as ivory, sandals, skins, and leather, were taken north across the desert and on to Europe. The desert was like an ocean—it was a wide barrier to be crossed.

At last, the Trans-Saharan caravan trade fell off greatly. Railroads from the coast below Cape Verde tapped the western Sudan. Timbuktu looked chiefly west to Dakar (Fig. 7), rather than north to Algeria. Automobiles were first driven across the desert more than 30 years ago. They made the trip in days, instead of months. Airplanes can cross the desert in a few hours. The Sahara is no longer as great a barrier to trade as it used to be. It is a new source of oil, which France is exploiting. Pipelines are being built to bring the oil out.

Helps in Learning

1. Do you think that control of the western Sahara is as important to France now as in earlier years? Why? Do you think it will be more important, or less important, in the future than now? Why?
2. Cotton goods are among the leading shipments from France to oasis towns in the Sahara. Why is this so?
3. It is sometimes said that much of the Sahara is "over-populated." How can this be true, since the population is small?

In Western Africa

Comparisons. The lands in western Africa south of the Sahara, Figure 7, are nearly three times as large as those north of the desert. The population, more than 21 million, is smaller (p. 92). The southern lands are more primitive than the lands of North Africa. Even here, however, Guinea's demand for independence has resulted in separation from France.

Drawbacks. The French lands south of the desert, like British West Africa (p. 49), are not well suited for white settlers. The total white population is about 75,000.

Most of the natives are backward. There are few railroads or highways. As a result, transportation is slow and expensive. Progress depends largely on the education of the



Figure 80. Stacks of peanuts

© Ewing Galloway

natives, and on better transportation. Meanwhile, the resources of vast areas, among them mineral resources, remain undeveloped.

Centres of government. All French West Africa is governed from Dakar, all French Equatorial Africa from Brazzaville (Fig. 7).

Looking at the map, one might think that St. Louis would be the main seaport on the west. It is at the mouth of a long river, the Senegal. This river might be expected to form a good route inland. In the rainy season the river can be navigated for nearly 500 miles. But in the dry season the water is very low, and then the entrance to the river is almost blocked with sand. So the French built a port south of the river at Dakar, on a bay formed by Cape Verde. They also built a railroad inland from Dakar for several hundred miles. Dakar is much larger than St. Louis.

Dakar is important not only as a centre of government and a doorway of trade, but also because it faces the narrowest part of

the Atlantic Ocean. This made it very important to the Allies in World War II.

Brazzaville is on the Congo River (Fig. 7). It is opposite Leopoldville, a Belgian town on the river. Until a few years ago, Brazzaville had no connection through French territory with the ocean. Now a French railroad connects the city with the sea (Fig. 7). One of the most powerful radio stations in the world was built at Brazzaville during the war. It was in a safe place. Broadcasts were made in about a dozen languages.

Grasslands and forests. Dense tropical forests cover most of the rainy coastal lands controlled by France. Between the Sahara and the forests, there is a broad belt of grasslands. The picture in Figure 79 shows grassland country on the Niger River, not far from the desert town of Timbuktu (Fig. 7). Between the two places the desert ends. Where the picture was taken, the natives raise cattle and grow crops. They use the river as a highway.

Many sheep and camels, as well as cattle, are raised in the grasslands. Hides and wool are taken to the coast for export. Peanuts and cotton are two promising crops. Of course, the chief handicap over wide areas is lack of good transportation. Figure 80 suggests the great value of good means of transportation. It shows huge piles of sacked peanuts along the railroad at Dakar, waiting for shipment to Europe. Peanuts are the main export of the colony of Senegal.

The forests on the rainy lands near the coast contain many kinds of trees of commercial value. Palm oil and palm kernels,

mahogany, ebony, and wild rubber are forest products.

Cotton goods, implements, and metal wares are leading items in the trade that moves into the colonies. Trade, not settlement, has made these lands worth while.

Helps in Learning

1. In what ways are French West Africa and British West Africa (p. 49) much alike?
2. It has been said that Britain "picked out the eyes" of West Africa. By this it is meant that Britain got the best parts. Do you agree, or not? Why?

French Influence in Other Lands

French influences are important in Madagascar, a free state within the French union. They were once important in Indo-China, but it is no longer a part of the French empire. France still has a few islands in the Indian and Pacific oceans.

Madagascar. The position of Madagascar first made it important. The island was discovered by an early Portuguese navigator on his way to India. For two hundred years or more, Madagascar was a base for pirates. They waylaid ships on the route between Europe and the East. Portugal, the Netherlands, Britain, and France all tried at one time or another to have settlements on the island. Finally, it became a French colony.

Madagascar is larger than France. The best part of the big island is the central highland. The highland has many fertile valleys, and is free from intense heat. Here is the capital, Tananarive (Fig. 7). Europeans can live comfortably in the highland. The east coast is wet, for there the southeast winds from the Indian Ocean are forced to drop much moisture. The west coast is dry.

The natives of Madagascar number over five million. They are not Negroes, and are

related closely to people in islands farther east and on the Malay Peninsula. Most of the natives are farmers and cattlemen. They have made steady progress under France. The island has thousands of miles of good roads, thousands of miles of telegraph lines, and thousands of miles of telephone lines. Native children between eight and fourteen years of age must go to school.

The farmers of Madagascar grow many crops. Rice, manioc, corn, potatoes, beans, coffee, and sugar cane are among the crops. Europeans have started various industries. They have large meat-canning factories in several places. Most of the outside trade of Madagascar is with France.

Viet-Nam, Laos, and Cambodia. The old name for these countries was French Indo-China. Before the last war, this area was a French colony. After the war, the area was troubled by local wars and revolts. Finally, the whole region became independent, and three separate nations were set up—Viet-Nam, Laos, and Cambodia. Even then, the troubles of these nations did not end. A communist group set up a separate government in northern Viet-Nam. Like Korea (p. 173), Viet-Nam



Figure 81. A clearing in Indo-China

© F. Kingdon Ward, from *Black Star*

is a divided land. The former Indo-China region is very much larger than France, but its population of some 31 million is not as great.

Figure 81 shows the home of a colonist in a clearing on the wooded banks of a river in Viet-Nam. The house is built to shed heavy rains, and to be as cool as possible. Trees grow thickly around the clearing. Much rain, much hot weather, and thick stands of timber—all these are common to Viet-Nam.

Most of the people live on the flood plains and deltas of the rivers, and on the narrow lowlands which borders the South China Sea (Fig. 5). In these areas the soils are rich, and irrigation for rice is easy. Rice is the great food crop and the great money crop. The Indo-China region is one of the great rice-growing areas of the world. Of course, there are other crops, such as sugar, corn, and manioc. But rice is the king of crops.

This region does not depend entirely on farming. Fishing is important, and fish is a common food of the people. There is some mining, chiefly of coal. Valuable tropical woods are cut in the forests that cover the northern mountains.

Many items usually enter into the large overseas trade of the area. Rice, fish, rubber, and coal are exported. Cotton goods, metal goods, and kerosene are imported. Most of the trade is with Europe.

Helps in Learning

1. Why do you think Madagascar is important to France? Was the former colony of Indo-China as important?
2. On the whole, do the British lands or the French lands in Africa seem more valuable? What has happened to most of the French lands in Asia?



Figure 82. The Kremlin and Red Square

THE SOVIET UNION

Land and People

The old Russia. In 1914, at the outbreak of World War I, Russia was a backward country. It had always been backward. It depended largely on agriculture. Two-thirds or more of the farmers owned no land. They worked for big landowners. There was not much manufacturing or mining. Most of the resources of the country were undeveloped. The masses of the people were very poor. They were ruled by an emperor, called the Czar.

The new Russia. During World War I, the Russian people grew alarmed at the great

losses in casualties. On the home front, they suffered from food shortages and high prices. The lead that the government should have given never came. In chaos, Russia surrendered to revolution in 1917, and the Communist party seized power.

The Communist leaders began to reorganize all aspects of Russian life. Their chief aim was to make Russia a great industrial power by controlling the economy of the entire country. Their methods were very costly to human life. Under a series of programs, called five-year plans, Russia gradually increased its farm production by establishing government-operated state farms and collec-

tive farms in which the peasants combined their lands. Five-year plans were also adopted to industrialize Russia. They have proved a success. But freedom, as we know it, is largely absent. With more goods becoming available, and with the pride taken in their country's scientific achievements, the Russians say that their way of life is better than ours.

A new name. When the new government was set up, a new name for Russia was adopted. It is the Union of Soviet Socialist Republics. The first and last words in the name show that the country is a *union* of areas that are called *republics*. There are now 15 republics in the union.

The country is called, for short, the Soviet Union. Soviet government and Soviet people are other common terms. The names Russia and Soviet Union are both used in this country.

The new government. The 15 republics have their own governments and capitals, with certain rights and powers. But the central, or Union, government has charge of most important matters. These include foreign affairs, military matters, and the development of agriculture and industry.

The government has a law-making body, the Supreme Council, which makes laws for the whole country. There is also a smaller body, the Praesidium, which is elected by the Supreme Council. The Praesidium acts when the Supreme Council is not in session. There is also a Supreme Court and a Council of People's Ministers. These ministers form a sort of cabinet. Describing the form of the government, however, does not tell how the government works.

Each Soviet Republic has some authority over local affairs, especially over education, local industry, public service, and insurance. But Russia is really ruled by a small group of Communist party leaders. Only one political party, the Communist, is allowed. In practice, the people do not vote for candi-

dates who are not approved by the Communist party. Although the people vote, therefore, they cannot choose between parties.

Stalin, Premier from 1941 till his death in 1943 and Secretary-General of the Communist party, was the strongest man in the government. The strong man today is Nikita Krushchev.

The centre. Russians speak of Moscow as the "Centre." Moscow is far from the centre of the whole country (Fig. 5), but it is the greatest railroad centre of the entire country, and a great business and manufacturing centre. It is the chief centre of government, the capital of the largest of the republics, and the capital of the whole Union. Hosts of people have been gathered in Moscow to work in the many government offices. Metropolitan Moscow has a population of more than seven million. Moscow is truly the "centre" of Russian life.

The centre of Moscow. The centre of Moscow itself is the Kremlin, where the chief executive lives and works. The high walls of the Kremlin, partly shown in Figure 82, surround palaces and churches built by Czars who once ruled the land. The tomb of Lenin and Stalin is outside the Kremlin walls in the right-hand centre of the picture. The open space is part of Red Square, in which military parades and outdoor meetings are held. The church in the background, beyond Red Square, is famous for its style and decorations. It is now a museum.

Driving westward. During World War II, Russia seized much new land. Most of it is in Europe, along the old Russian frontier. The new Russian land there is shown on the map in Figure 83.

Important areas were taken that had belonged to Finland, Germany, Poland, and Rumania. All of Estonia, Latvia, and Lithuania, three small countries on the Baltic Sea, was added to Russia. The total area gained on the west is larger than the combined area of the Maritime Provinces and Newfound-



Figure 83. Russian expansion westward

land. The total population in the area that was added is about 24 million.

Control of this land makes the Soviet Union stronger than it was before. It gives Russia more people, more resources, and more industry. It also places a barrier of land between the old Russia and the nations of western Europe. In World War II, German armies reached Leningrad on the north, Moscow in the middle, and Stalingrad on the lower Volga River (Fig. 83). Now, control of the land gained during World War II makes Russia stronger along its western border.

Russia has wanted even more land toward the west than it gained from the last war. In various ways it has brought heavy pressure on several neighbor countries, winning great influence over them. They are really captive countries, ruled by the Communist party. As a result, Russia has gained much beyond its new boundaries. Freedom of navigation of the Danube River was recognized after the war, but in practice is controlled by Russia and her satellites. The Danube flows in or along seven countries before reaching the Black Sea.

Toward the west, then, Russia has won much land and many advantages.

Gains in the Far East. In the Far East, where Russian interests and Japanese inter-

ests had long clashed, Russia has made other gains. It has annexed the southern half of the big island of Sakhalin (Fig. 5). Sakhalin has oil, coal, iron, and other mineral deposits. Russia has also taken the Kurile Islands (Fig. 5) from Japan. The Kuriles are important to Russia mostly because they lie across sea routes that lead to Russian ports on the Pacific Ocean.

A glance at the map in Figure 5 will show that part of China is west of Vladivostok, the Russian port. The way to Vladivostok in Russian territory is roundabout. Czarist Russia once had railroad and port privileges in this part of China, but lost them to Japan. After World War II, Russia demanded and got the renewal of these privileges.

Following World War II, Chinese Communist armies gained control of the entire mainland of China. This added to the influence of Russia in another vast area.

Very big. We have already seen that Russia is immense (p. 17). With its new lands included, it is more than twice the size of Canada. It is as large as North America north of the Rio Grande.

The globe in Figure 84 is placed so that the North Pole is at the centre. It shows that Russia reaches, from east to west, nearly halfway round the world.

When it is noon at one of the Russian cities on the Baltic Sea, it is half-past ten in the evening at a settlement in eastern Russia, west of Bering Strait. This difference in time is a measure of the great length of Russia, east and west. We can see from the globe that the width of Russia, north and south, is also great.

Very many. The population of Russia, like the country, is very large. The people now number more than 200 million. More people live in Russia than in any other country, except India and China. Most of them, by far, belong to a race of people called Slavs. In European Russia there also are Finns and Poles, Germans and Greeks, and many others.

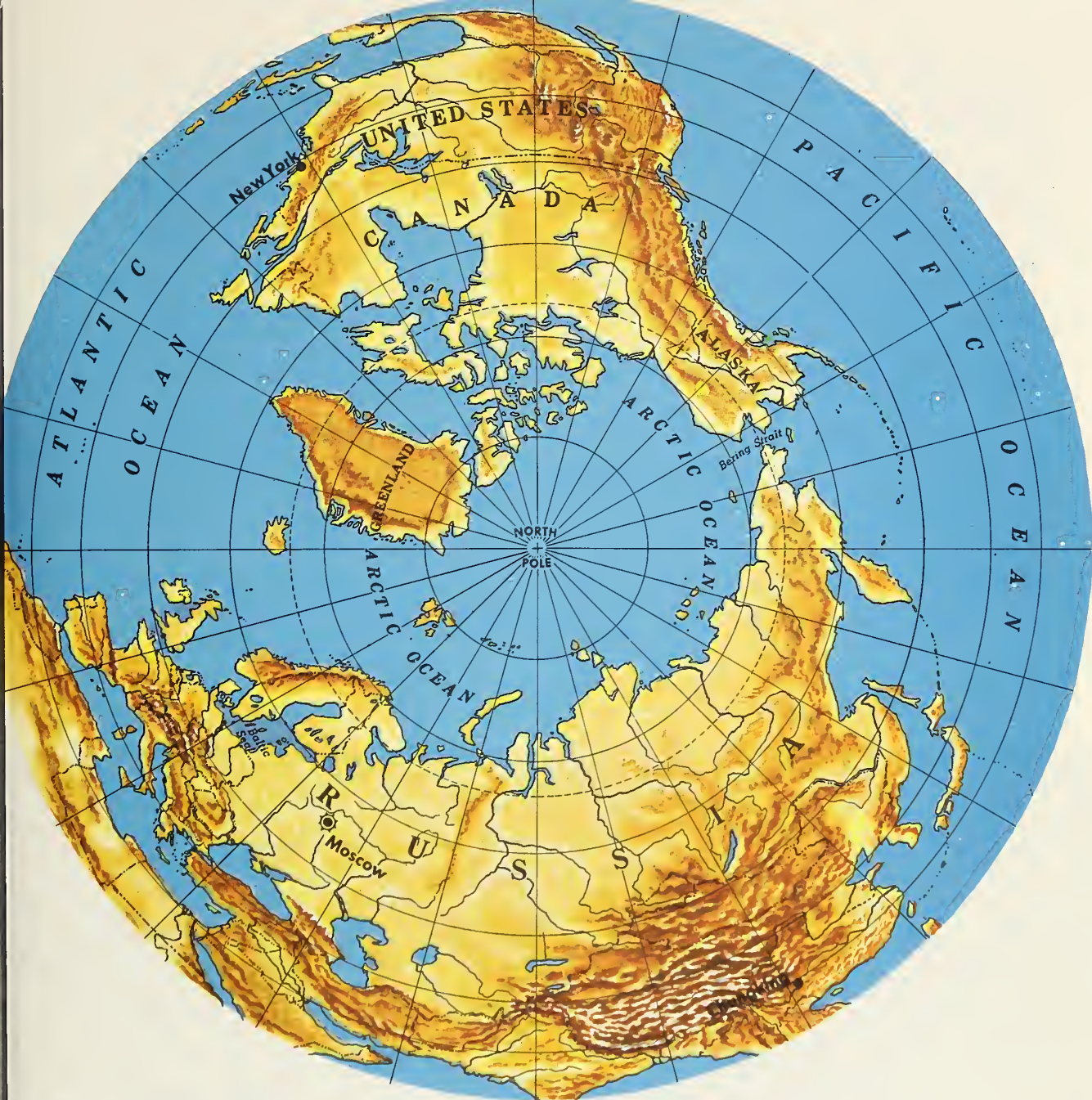


Figure 84. Around "the top of the world"

Many different peoples also live in Asiatic Russia.

There are said to be, all told, nearly 200 different national and racial groups in Russia. Whatever the actual number, Russia certainly is a country of many peoples. It has "peoples of all kinds and varieties, ranging from the most primitive to the most advanced."

Sameness. It is possible to travel day after day across the open Russian plain (Fig. 11), as on our prairies, without seeing much change. The land looks the same, the people are doing the same things, the towns and villages seem alike.

In western Europe, it is very different. There a traveller meets with many changes and much variety in short distances. In an

hour or less he may pass from highland to lowland, from truck farms to grain farms, from large cities to tiny hamlets. By comparison, most of Russia is monotonous.

Of course, one can take a longer trip in Russia along an east-west line than along a north-south line, without seeing any great change in the appearance of the country.

Shut in. Although Russia is a huge country, its location is such that it has few ocean harbors that are open all year. For centuries, Russia has tried to get harbors on warm waters, to gain better outlets to the high seas (pp. 17-18).

It is true that Russia has obtained thousands of miles of seacoast (Figs. 5 and 84). But it is true also that most of the Russian seacoast has little value. Nevertheless Russia is expanding her naval power greatly.

The main outlet. St. Petersburg was built early in the 18th century on a marshy delta at the head of the Gulf of Finland. It was built to give Russia an outlet to the Baltic Sea, the North Sea, and western Europe (Fig. 60). St. Petersburg is now called Leningrad. It is the greatest seaport in Russia. The population of the city is more than three million.

As at Montreal, the harbor at Leningrad is frozen from early November to April. Powerful icebreakers keep channels open till December, though with difficulty in most years. Figure 85 shows an icebreaker in the Gulf of Finland, near the city.

Leningrad is some 1200 miles from the main shipping routes in the North Sea. The way to them has been controlled by other nations. At any time, these nations could

[108]

Figure 85. Ramming the ice

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have prevented Russian ships from getting out. Now that Russia has spread to the west (Fig. 83), its position is somewhat better. It now has several ports on the Baltic.

The southern outlet. Odessa is the leading port of Russia on the Black Sea (Fig. 86). It is the second largest seaport in all Russia. Though far south of Leningrad, the harbor at Odessa would freeze over for several weeks in winter if not kept open by icebreakers. The Black Sea itself can be navigated at all times.

The great trouble with this southern outlet, in the minds of the Russians, is that the narrow waterway between the Black Sea and the Mediterranean Sea is in foreign territory. They have wanted for centuries to get control of the narrow channel that leads from the Black Sea to the rich, warm waters of the Mediterranean. They have tried to do so time after time but have never been successful (p. 18).

The northern coast. Of course, it is the long Arctic coast that is least useful. At the very western end of the coast, however, Russia has an outlet round northern Norway. A warm current of water from the Atlantic Ocean keeps it open. The United States and Britain sent great quantities of supplies to Russia by this route during World War II.

The harbor at Archangel (Fig. 86), at the southern end of the White Sea, is frozen from November to May. All the way between the White Sea and Bering Strait (Fig. 5), navigation is closed in winter and hard in summer. In spite of difficulties, some sea trade along the Arctic coast is carried on during the short summer.

Like Canadians, the Russians have made a long and thorough study of Arctic weather. They have more than 50 weather stations along the northern coast that make forecasts by radio. Powerful icebreakers are used to open channels. An atomic-powered icebreaker will soon be in use. An airplane

patrol gets information about floating ice. With these aids, a ship can make two round trips between Archangel and Kamchatka (Fig. 5) in a navigation season. A few years ago it took a ship two summers to make the trip one way. The ship was locked in the ice through the long winter. Russia is doing much to make the best of a bad coast.

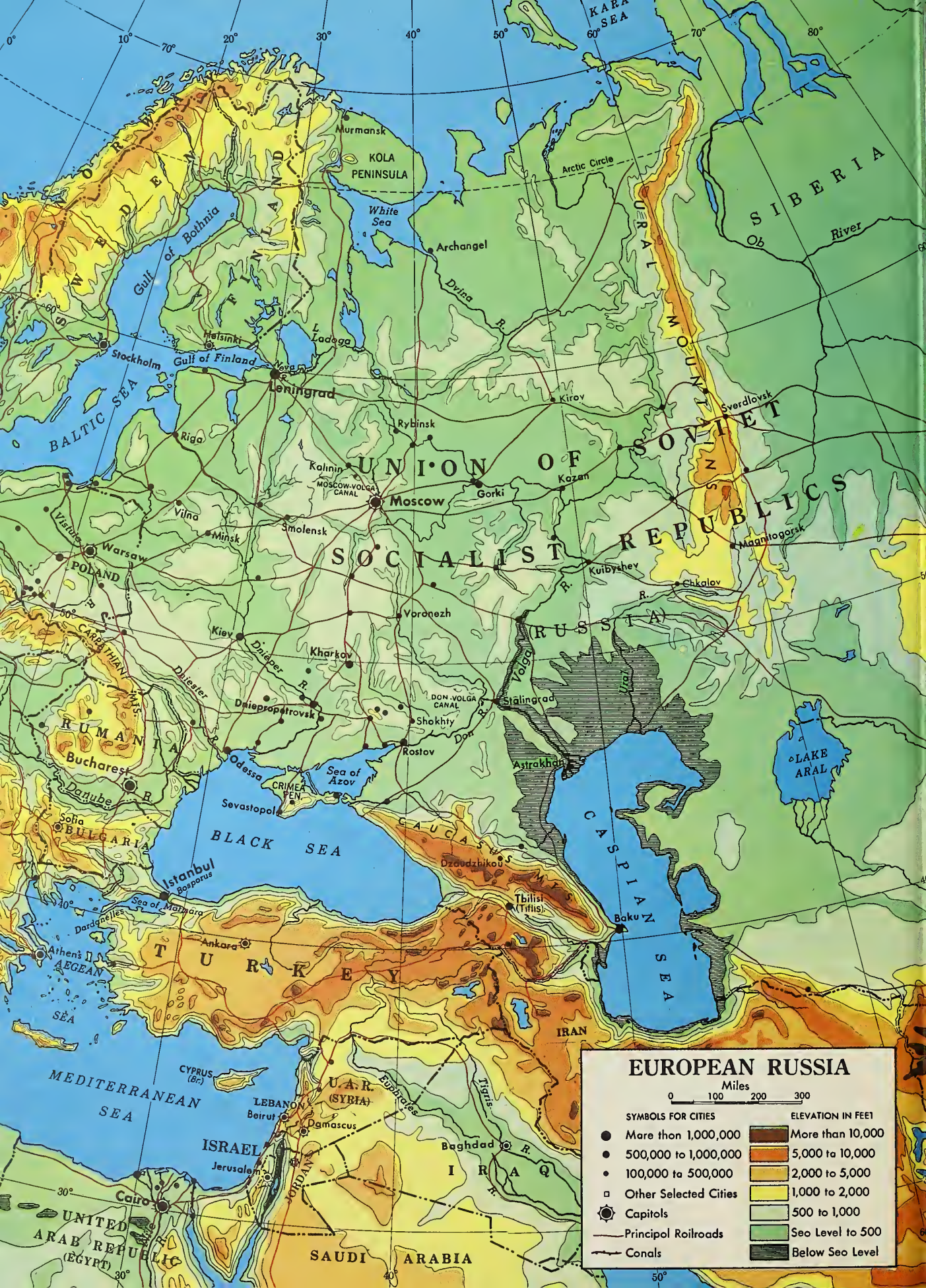
Trade by this northern sea route probably never will be large. Behind the coast there is a belt of frozen tundra, where few people can live.

The eastern coast. The Pacific coast of Russia is not so bad as the Arctic coast. It is, however, bad enough. The Sea of Okhotsk (Fig. 5) is full of floating ice in summer. There are many severe storms. Almost always there are dense fogs. Before the war, Kamchatka was completely isolated from September to May. Even at Vladivostok, the southernmost port, ships can use the harbor in winter only with the help of icebreakers.

Sea, land, and air. As we have seen, Russia has lacked close contact with the main seaways of the world. This has been a great disadvantage. Except at the west, Russia has also been shut in for long distances by land barriers. Wide deserts and high mountains separate much of Asiatic Russia from the leading countries to the south. But Russia is finding a new place in the world because of the airplane. And air transportation is developing more rapidly than any other kind in Russia.

The globe in Figure 84 shows that Russia borders one half-circle of the Arctic Ocean, while the other half-circle is bordered by the northern coasts of Greenland, Canada, and Alaska. The shortest airways between many points in North America and many points in Eurasia cross the Arctic region. For example, the shortest air route from New York City to Chungking, wartime capital of China, passes over the North Pole and across Siberia.

The "top of the world" will have a new meaning in the future. Siberia, as the whole



EUROPEAN RUSSIA

0 100 200 300
Miles

- | SYMBOLS FOR CITIES | | ELEVATION IN FEET | |
|--------------------|-----------------------|-------------------|------------------|
| ● | More than 1,000,000 | ■ | More than 10,000 |
| ● | 500,000 to 1,000,000 | ■ | 5,000 to 10,000 |
| ● | 100,000 to 500,000 | ■ | 2,000 to 5,000 |
| □ | Other Selected Cities | ■ | 1,000 to 2,000 |
| ★ | Capitals | ■ | 500 to 1,000 |
| — | Principal Railroads | ■ | Sea Level to 500 |
| — | Canals | ■ | Below Sea Level |



Figure 87. In the cold and snowy North

Figure 88. In the hot and arid South



of northern Asia is commonly called, will lose much of its old-time isolation. Russia will be close to North America.

Good land, poor land. The amount of good land in a country may be much more important than the total amount of land. Most of Russia is not good for ordinary farming.

At the north, Russia is too cold for ordinary farming. Over vast areas in the Far North, any farming is almost impossible. The few people there live chiefly by reindeer herding and hunting and fishing. In Figure 87, a northern hunter has found a place to leave his reindeer while he looks for game.

At the south, east of the Caspian Sea, it is too dry. Farming without irrigation is impossible. Poor grasslands and deserts cover great spaces. Herdsmen move from place to place in search of pasturage. In Figure 88 a patrol is making its way on camels through shifting desert sands.

Even in the better part of the country, between the cold North and the dry South, there are large areas where the soil is poor or the land is wet.

Although Russia is much larger than Canada, it probably has not much more good land. Russia has fourteen times as many people as Canada, yet only five times the output of grain that we have. Big as it is, Russia needs more farm land. As we shall see later, new irrigation projects in the dry lands and new ways of farming in the cold lands are helping somewhat to meet this need.

Rivers. The great plains of Russia have long slopes, and so they have long rivers. The Volga River, Figure 86, is the longest river in all Europe. It is only a few miles longer than the St. Lawrence, our longest river. The Ob, Yenisei, Lena, and Amur, the great rivers of Siberia (Fig. 5), are among the ten longest rivers in the world.

The main rivers and hundreds of smaller ones make up many thousands of miles of

transportation routes. They are a great help to Russia.

The Volga is most important. It carries about half the total river-borne freight of the country. It also has a large passenger traffic. Figure 89 shows a big passenger steamer nearing a town on the lower river. In addition to many towns, there are seven large cities on the banks of the Volga. No railroad follows along the river, to compete for traffic. Much oil and coal move upstream. Much timber is floated downstream.

The picture in Figure 90 was taken far to the east of the Volga, on a branch of the Yenisei River, not far from the boundary of Mongolia (Fig. 5). This remote region has rich mineral deposits, and good timber. Mining and logging have developed. Travel and trade follow the river. The steamboat in the picture runs north to Krasnoyarsk, where the Trans-Siberian Railroad crosses the Yenisei (Fig. 5). There trains and river boats meet, and trade is lively. Krasnoyarsk is a large city. Doubtless the logs along the river bank in the picture will be floated downstream to Krasnoyarsk.

As in Canada, logs are floated down many of the streams that flow from forested parts of the country. Figure 91 is a view on the largest tributary of the Volga. The logs will go to sawmills downstream. The lumber cut in the mills will probably be used in the cities and towns along the lower Volga, where there are no forests.

While the waterways are of great value to Russia, they have serious drawbacks. The Volga ends in a land-locked sea, really a huge lake, which has no outlet. Several of the greater rivers flow north, as our Mackenzie River does, to the icy Arctic. In Siberia, the north-flowing rivers cross the main line of travel and transportation, which is east and west. They flow the wrong way. All the rivers are closed by ice in winter. The Volga is icebound at its mouth for three months. Some of the northern rivers are

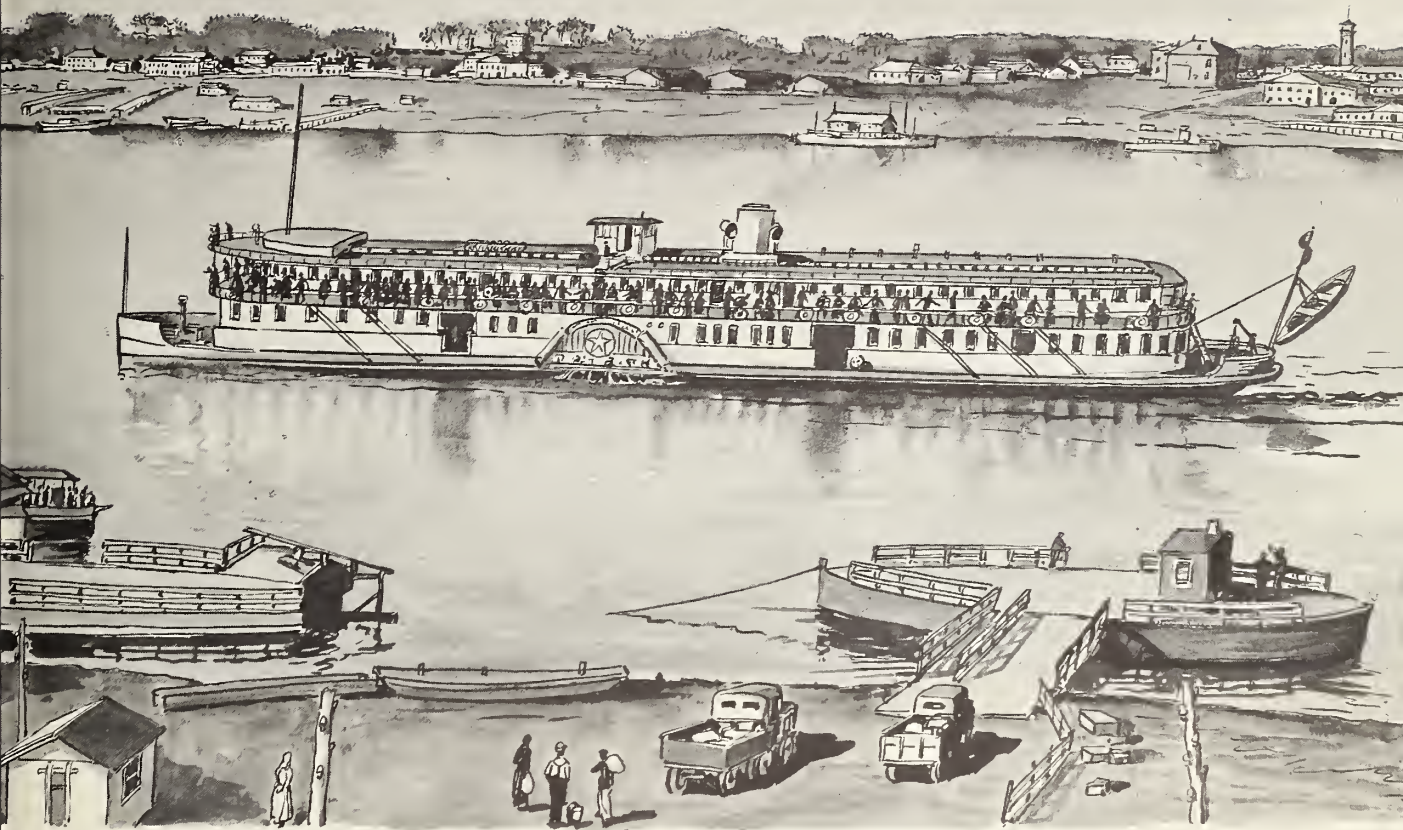


Figure 89. A summer excursion on the Volga

frozen over every year for six or seven months.

Water power. There are few places on the rivers in the plains of Russia where water power can be developed. The river beds slope gently. There are rapids, however, in the Dnieper River near Dnicpropetrovsk (Fig. 86). At the rapids a great dam and power plant were built for Russia by American engineers. The dam, almost half a mile long, raised the level of the river just above it by about 125 feet. The power plant was the largest in Europe. The Russians took great pride in it. The dam and plant were largely destroyed during World War II. After the war, Russia promptly started to rebuild them. They are now in use again.

Swift streams, some of them fed by melting snows, flow from the Caucasus Mountains

(Fig. 86), and from the mountains of southern and eastern Siberia. Much power can be developed on these streams, when needed. Some can be developed, too, in the Ural Mountains. Figure 92 shows a new water-power station east of the Caspian Sea, near the border of Iran.

Canals. By building canals, the Russians have added hundreds of miles to their inland waterways in Europe. The nearly level plain helped to make it possible to build the canals. Some of them are old, more than 100 years old, and some are new. More canals are under way or planned.

Figure 93 shows several boats passing through a lock in the big Moscow-Volga Canal (Fig. 86), finished in 1937. The people of Moscow are very proud of this canal. It brings water from the upper Volga, some

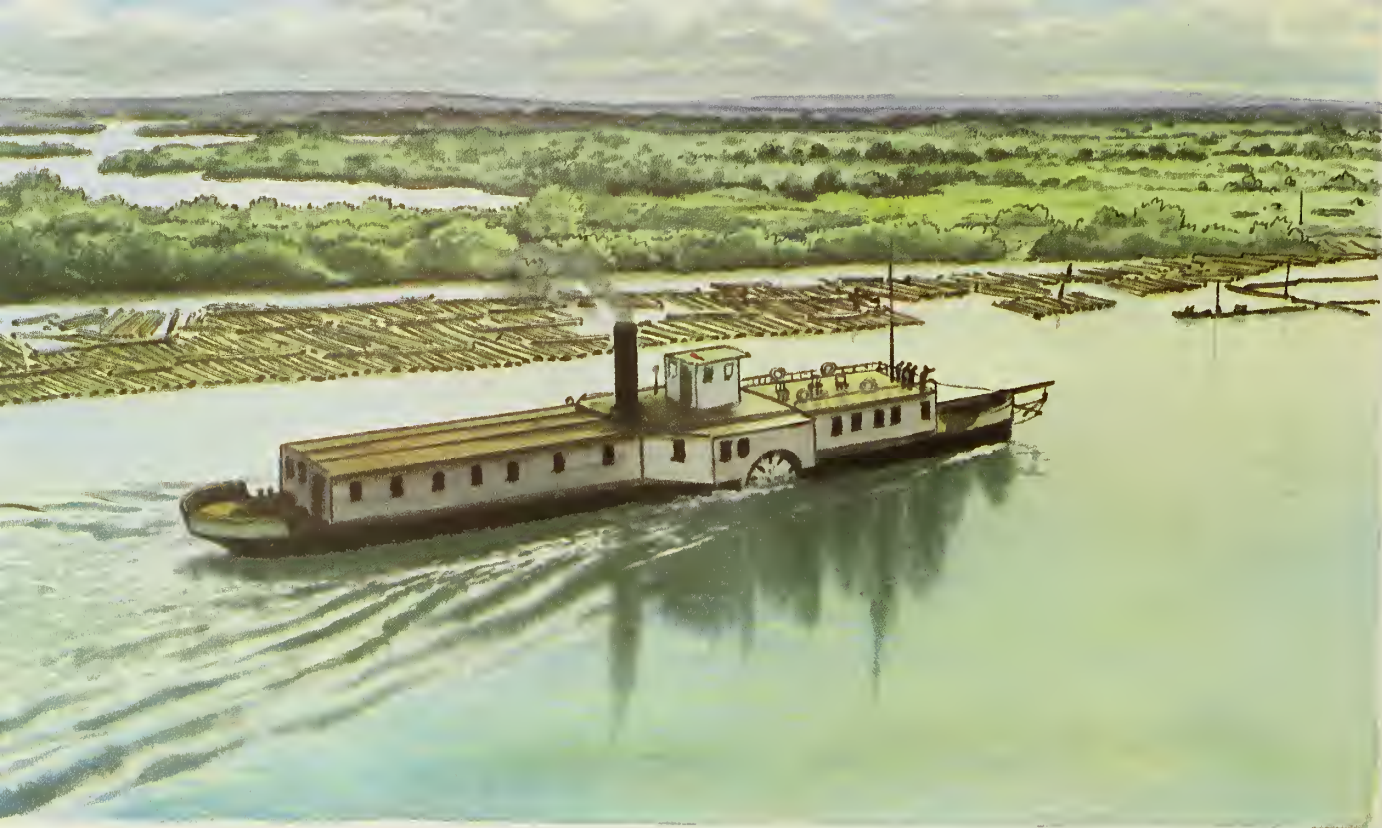


Figure 90. On the way to Krasnoyarsk

Figure 91. On the way to the lower Volga



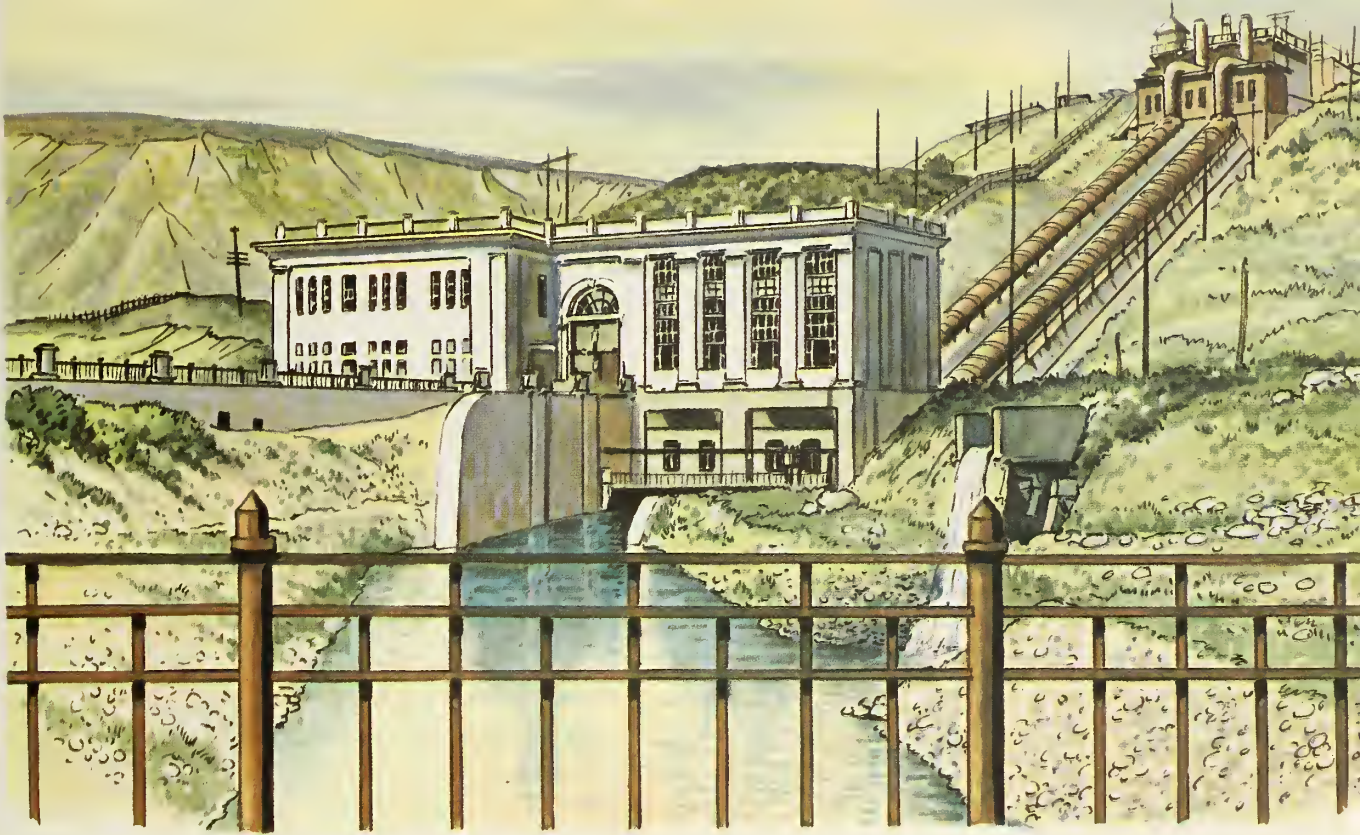


Figure 92. A new power plant

Figure 93. A new canal



80 miles away to the north, to the small branch of the Volga on which the city stands. This increases Moscow's water supply, which had been too small for the fast-growing city. Now, too, fairly large barges from the Caspian Sea can reach the city. The people of Moscow call their city a seaport.

As the map in Figure 86 shows, the Volga River at Stalingrad is near the big eastern bend of the Don River. The two rivers are joined by a canal completed in 1952. The Don flows into the Sea of Azov, which is connected by a strait with the Black Sea. The canal lets barges and steamers pass back and forth between the two rivers, and between the two seas—the Black Sea and the Caspian Sea.

Roads. Russia has not paid so much attention to road-building as Canada, even in the areas where most people live. Outside the cities, almost all roads are unimproved dirt roads. Very few are topped with gravel. Fewer still have hard surfaces. In summer, the ordinary roads are very dusty or very muddy, depending on the weather. When the ruts are frozen, but not covered with snow, the roads are very rough. Overland travel by road is not easy much of the time, though some roads run for many miles in straight lines across the level plain. Figure 11 shows a long, straight road.

Various things help to explain the neglect of road-building. The country people of Russia live in villages. They do not need as many roads as they would if they lived on individual farms. Over much of the plain, the soil is deep and material for building roads is scarce. Gravel would have to come largely from the beds of streams. Hard roads are expensive. Very few of the people can have automobiles, which call for good roads.

In Canada, the mileage of hard roads and the number of automobiles increased together. Automobile owners demanded hard roads. They helped to build many of them with the fees they paid for automobile li-

cences. The spread of good roads, in turn, helped to bring about the use of more automobiles. Hard roads and automobiles may sometime be common in Russia. The manufacture of automobiles there is increasing. The use of trucks by the Red army increased rapidly during World War II. Such signs as these may point the way to better roads.

The roads of Russia are best when frozen and covered with snow. Except where deep snowdrifts block the way, it is easier then to go almost anywhere by road or across country. Figures 94 and 95, on the opposite page, show two means of transportation, one old, the other new, in the Far North. Both pictures could very well have been taken in Canada.

The picture in Figure 94 was taken in early winter, in the wooded edge of the tundra. Two men are making their slow way overland by reindeer sled.

The trucks in Figure 95 are on a frozen, snow-covered river in eastern Siberia. They are taking tools and food supplies to a distant gold-mining camp inside the Arctic Circle. These trucks were sent to Russia by the United States during the war, under an arrangement known as the "lend-lease plan." With supplies of many kinds, they had been shipped across the northern Pacific in Soviet vessels from Oregon, before Russia entered the war against Japan. Gold and furs from the Far North were two of the products that Russia sent in part payment for the war supplies it received.

The men in both these pictures are warmly clad against the bitter cold.

Railroads. Only the main railroads of Russia are shown on the maps in Figures 5 and 86. The central and southwestern parts of European Russia are fairly well served with railroad lines. The rest of the country is not. The total railroad mileage is only a little more than the mileage of railroads in Canada, though the Russian railroads carry much more freight. The 5700-mile-long Trans-



Figure 94. The old way

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Figure 95. The new way

© Sovfoto

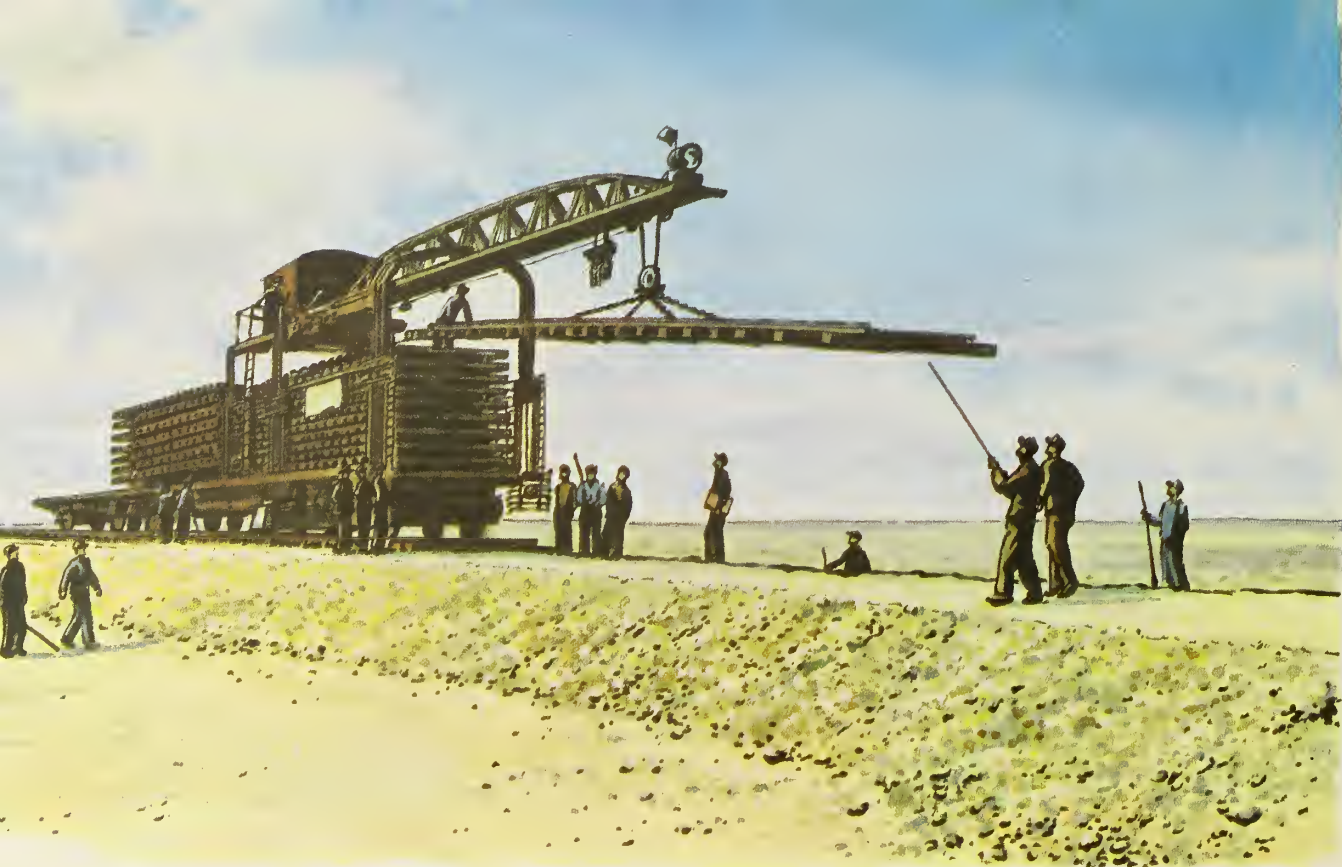


Figure 96. A sign of progress

Siberian Railroad, linking Moscow with the Pacific Coast, is the longest system in the world.

Now Russian railroads are being somewhat improved. New railroad lines have been completed; others are under way. For instance, one new line taps a coal field near the northern Ural Mountains. Another line has been built to the Pacific, opposite the island of Sakhalin. It leaves the Trans-Siberian Railroad between Krasnoyarsk and Irkutsk (Fig. 5), and runs north of Lake Baikal. The famous Trans-Siberian line itself has been double-tracked from end to end of its great length (p. 16). An era of railroad-building in Russia may be opening.

New methods in building railroads are used. Figure 96 shows a track-building machine of the Soviet railroad system at work. Sections of rail, already fastened to the cross ties, are being lifted from a flat car and put down on the finished roadbed.

Mineral resources. Russia, like our own country, is rich in minerals. How rich it actually may be is not known. Possibly it has more kinds of useful minerals in large amounts than any other country. Not all the deposits are of high grade. Many are not where it is easy to use them.

Russia is fortunate in having large deposits of coal, oil, iron ore, manganese ore, and aluminum ore, the chief minerals needed for modern industry. The general location of the deposits of these key minerals is shown in Figure 97. Russia also is fortunate in having immense deposits of rocks from which it can get phosphate and potash. These mineral fertilizers are needed in large quantities for the farm lands of the country. The strength of the Soviet nation rests largely on agriculture and industry. So the great importance of these seven mineral resources is clear.

The other mineral resources of Russia include copper, lead, zinc, nickel, tin, chromi-



Figure 97. Key minerals and main industrial areas

Figure 98. Oil derricks on the shore of the Caspian



um, mercury, asbestos, sulphur, gold, silver, and platinum. The list is long.

Of all Russia's mineral resources, the one known best to other countries is oil. The richest oil deposits so far developed are near the Caspian Sea (Fig. 97). The wells there once yielded about half the world's output. The oil derricks in Figure 98 are on the shore of the Caspian at Baku (Figs. 86 and 97). In the picture we are looking from the sea to the shore. Pipelines lead to ports on the Black Sea. Much oil is shipped in boats on the Caspian Sea to the Volga River (p. 112). Baku has large oil refineries.

Progress without freedom. Old Russia, a backward country (p. 104), depended a good deal on such manufacturing countries as Britain and Germany. They bought wheat, oil, and other raw materials from Russia. They sold manufactured goods in Russia.

After the revolution, Russian leaders undertook to develop Russia as a great industrial and agricultural nation. As we read about the steps that were taken to bring this about, it is necessary to remember that the Russian people themselves had little or no choice about what was done. Whether they were peasants or factory workers, they worked where they were told to work by government officials. They were punished if they refused to do so. The revolution brought to the masses of Russian people few of the freedoms they had hoped for.

Helps in Learning

1. The size of a country is not alone a good measure of its importance. Why is this true? Show that it is true in the case of Russia. In the case of Britain.

2. Why could one travel farther in Russia along east-west lines than along north-south lines without seeing any striking change in the appearance of the country (p. 108)?

3. Why is it that Russia, in spite of thousands of miles of coast line, is almost landlocked?

4. In what ways are Russia and Canada alike? In what ways are they different? In which country have people the greater amount of individual freedom? Tell why this is important.

5. As you can see from Figure 84, Canada and Russia are near neighbors. Do you think that in the future the Arctic regions of Canada and of Russia will become more important? Give your reasons.

6. What did you read about country roads in Russia that probably helps to explain the poor roadbeds of most of the railroads?

7. What is the greatest difference in the distribution of Russian lands and British lands? Which kind of distribution do you think is better? Why?

8. Vast, open plains cover most of Russia, as we have seen, but there also are high mountains in the country. The pictures in Figures 99 and 100 were taken in the highest mountains shown on the map in Figure 86.

(a) What is the name of these mountains?

(b) In how many ways does Figure 99 show that the tops of these mountains are very high?

(c) In how many ways can you tell that the picture in Figure 100 was taken in the lower part of the mountains? In what season of the year was it taken? How do you know?

(d) Why can nothing grow on the slopes in Figure 99? Does that mean the upper slopes have no value for the Russians? Why, or why not?

9. Figure 101 is a scene in the high mountains, southeast of the city of Tashkent (Fig. 5), that separate Russia from westernmost China. The long caravan is moving slowly along the Russian part of an ancient route still called the "silk road."

(a) Why does the road follow the stream?

(b) Do you think the water in the stream is high, or low? What makes you think so?

(c) Do you think the goods on the camels are probably valuable? Cheap? Why do you think so?

(d) Do you think the slopes in this picture get more rain, or less rain, than those in Figure 100? Why do you think so?



Figure 99. Barren peaks

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Figure 100. Grassy slopes

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Figure 101. Where camels still hold their own

Some Parts of Russia

On the Baltic Sea. Estonia, Latvia, and Lithuania have been part of the Soviet Union for only a short time (p. 105). They add more than 1000 miles of coast line to Russia. Many changes in all three areas may be made by the Russians.

The land of the three sections is low (Fig. 86), and dotted with small lakes in some regions. Most of the good soil is cultivated. The forests of pine, fir, and other trees yield much timber. All three of the areas depend chiefly on their farms and forests.

There are few large towns, and little manufacturing.

The main crops are rye, oats, wheat, barley, flax, and potatoes. Many farmers keep dairy cows. The older farm buildings are surrounded by clumps of trees. The newer ones may stand in open fields. Many of the farm homes, built of wood or stone, look much like the Estonian home in Figure 102.

The long raft in Figure 103 is drifting down a sluggish river in Latvia. Logs cut along the upper river were fastened together by wire to make the raft. Other logs were thrown on top. Men live on the raft during

the slow trip downstream. This river empties near the city of Riga (Fig. 86), a great market for timber. The raft probably is going there.

Riga is the largest city in this area. It is nearly 800 years old. Time and again rival countries have fought for it. The trade of Riga has reached far beyond Latvia, deep into Russia. Perhaps the city now has a permanent place in the Soviet Union.

Main farming area. From the northern forests of European Russia to the Black Sea, most of the land is used for farming. In a rough way, the northern limit of this great area is a line running east from Leningrad. The northern part of the farming area was covered at one time with forests. Much of that part is still dotted with woodland. The southern part, with less rain (Fig. 58), was covered with prairie grasses. Toward the east, the prairie gave place to dry steppe land and desert at the northern end of the Caspian Sea.

The climate of the great farming area is somewhat dry, even where most rain falls (Fig. 58). Russia is far from the Atlantic Ocean, on which it largely depends for moisture. Fortunately, for Russia, most of the precipitation comes in summer, when crops are growing. Unfortunately, the summer rains have failed in some years in many places. Then crops withered and died. Hunger and famine stalked the land.

Especially in the middle and northern parts of the area, summers are short and winters are long. There is little time for plowing and planting in spring, after the snow is gone and the ground is firm enough to work. Spring work must be rushed. Soon it is too late to plant. The harvest season is short, too. Heavy frosts come early. Planting in the autumn is impossible. It is far too cold for winter crops.

The best soils for farming are in the prairie country at the south. Grass enriches soil more than leaves. Most farm lands that

were prairies have better soils than cleared forest lands. The city of Kiev, Figure 86, is in a large region of rich prairie soil. This region is called the black-soil belt. The deep, loamy-clay soil is very dark because in it there is much humus, or decayed vegetation.

The belt of land in European Russia where the dots are thickest on the population map in Figure 66 is, in a general way, the belt where the land is best for farming. Most of the people live where the land is good.

Crops. In the northern part of the main farming area, rye, wheat, barley, flax, oats, and potatoes are leading crops. Rye is suited to the cool summers and short growing seasons. In old Russia, black bread made of rye and molasses was the most common food of the peasants. Today, new kinds of spring wheat are grown on much land. The acreage of wheat is about as great as the acreage of rye.

In the southern part of the area, wheat is the leading crop. Rye, oats, barley, and millet are less important grain crops. Near the Black Sea, corn is grown. Much land is used for sugar beets and sunflowers. The sunflower is grown chiefly for the oil in its seeds. And Russians like to munch sunflower seeds, just as many Canadians like to munch peanuts.

Changes in farming. Grain farming has always been the most important kind of farming in European Russia. Even in the better parts of the main farming area, the peasants, unless near a city, have raised hardly any vegetables except cabbages. They have had few orchards, and have grown little fruit of any kind. For so large a population, the number of cows and pigs and chickens has been small. In general, the yields of grain to an acre have been low.

Clearly, many changes in Russian farming have been needed. They include better crop rotation, better seed, more root crops, more stock, greater use of fertilizers, and more and better farm machinery.



Figure 102. An Estonian farm

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Figure 103. A Latvian river

© Monkmeyer

The new government is bringing about many changes along these lines. It is doing so in part by means of what are called collective farms and state farms.

Collective farms and state farms. The farms of Russia no longer belong to individuals (p. 104). They belong to the state. Privately owned farms have been replaced by collective farms and state farms. Many peasants opposed the changes bitterly.

The people on a collective farm work together, under a farm manager approved by government officials. They are paid according to the work they do, be it plowing, cutting grain, milking, fixing tools, or something else. They are paid partly in produce of the farm, partly in cash. Usually the cash income is small. Each peasant also can own his own house, and have a garden of his own.

On a state farm, the workers are paid wages, but receive no part of the crop.

These new kinds of farms are not limited to the farming area of European Russia.



Figure 104. Seeding time

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They have been set up in all parts of the country. All told, there are several hundred thousand collective farms, and several thousand state farms. Most state farms are where the farming risks are greatest. Some are in the drier regions. Others are in the colder regions.

The average amount of land put in crops each year on a collective farm is more than 1000 acres. The average on a state farm is more than 6000 acres. On both, farming is done on a big scale.

Modern farm machinery is taking the place of the simple tools and implements of the peasant farmers of earlier days. Tractors and combines are common sights in the grain fields. Machine Tractor Stations supply machinery for use on collective farms, under contract. In Figure 104, a tractor is pulling five seeding machines across a huge field on a collective farm.

Some of the work on collective farms is still a mixture of old ways and new ways.

The picture in Figure 105 was taken in the dairy section of a collective farm northeast of Moscow. Women are doing the afternoon milking. The young woman at the right is keeping a record of the milk. She is called the "zootechnician." It is a very old practice in Russia for women to do the milking. The effort to raise better cows that give more milk is new in Russia.

South of the Caucasus. The women in Figure 106 are picking tea leaves on a state farm south of the Caucasus Mountains, near the Black Sea. It is hoped to increase greatly the production of tea in this region. Russians everywhere drink much tea, and it has had to be imported.

Not far from the place where the picture was taken there are new orange groves and lemon groves. Many more are planned. In the past, both oranges and lemons have been known to most Russians only as great luxuries.

The region where these crops are grown



Figure 105. Milking time

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is protected from cold north winds by the Caucasus Mountains. It is warmed and watered by winds from the Black Sea. The region is not large, but the Russians plan to make the most of it.

The Crimea. Another small area with a mild climate, very different from the climate of the lands farther north, lies along the southern coast of the Crimea (Fig. 86). Here, too, mountains give protection from cold winds. Olives and grapes are grown. There are winter resorts on the coast. In the old days, this coastal area was called the Russian Riviera.

East of the Caspian. Little rain falls in a vast area east of the Caspian Sea (Fig. 107). The amount decreases toward the south. Dry steppes, with thin grass, give way to even drier deserts. Of course, not all the

desert land is as barren as that in Figure 88. Very few people could live anywhere in the deserts, or even the poorer steppes, however, were it not for the streams that flow down from the high mountains to the east and southeast (Fig. 5).

From earliest days till now, water has been taken from the mountain streams for irrigation. Some of the irrigated oases were stations on ancient caravan routes (p. 9). Some irrigation canals now in use are centuries old. The irrigated lands, set in the midst of empty spaces, are settled thickly.

Many crops are grown on the irrigated lands. The fruits—peaches, plums, apricots, melons, grapes, and others—are praised for their high quality. Wheat, rice, and barley are common food crops. Silk and tobacco are important products. But cotton is the chief

product. Most of the irrigated land is used for growing it.

The Russian government has done much to improve and increase the production of cotton, started in this part of Russia nearly a century ago. New irrigation systems have been built. Part of one big system is shown in Figure 108. Cotton-picking machines have been tried. A cotton textile industry has been started in the oasis city of Tashkent (Fig. 5). This city is a good place for the industry. It is growing fast and has been called "the Soviet show-window for Asia."

Much water has to be used on each acre of these irrigated lands, whatever the crop. The supply of water will set a limit to irrigation. The supply is very small, compared with the area of dry land. Almost all of the poorer steppe land and desert must remain nearly or quite empty.

Western Siberia. Siberia has long been a place to which prisoners from European Russia were sent for punishment. Many were not criminals, but people who opposed the government in some way. Siberia is still a land to which people are sent year by year for punishment. Many of them are forced to work in labor camps. Hundreds of thousands of war prisoners, also, are still forced to work in labor camps.

In recent years, however, many people from western Russia have been encouraged by the government to volunteer to settle in Siberia. A section of the Trans-Siberian Railroad stretches east from the Ural Mountains a thousand miles or more across a flat plain covered with collective farms. In summer, big fields of wheat, oats, barley, rye, and flax stretch far away on both sides of the railroad. Now and then cattle are in sight. Grain elevators mark the positions of the towns along the line.

The railroad runs through several cities at the crossings of rivers, that flow northward into the forest belt and on to the Arctic (p. 112). Flour mills, meat-packing houses, and



Figure 106. Picking tea leaves

© Sovfoto

sawmills are the common industrial plants.

This region is the best part of Siberia for farming. It is much like the main farming area of European Russia. Broadest at the west and narrowing eastward, it reaches almost to Lake Baikal (Fig. 5).

Other areas. Three more areas in Asiatic Russia call for special mention. They lie to the south, far to the east, and north of the good farming area in western Siberia.

To the south, the better steppe lands are used for dry-land farming. A kind of wheat that needs less rain than ordinary wheat is the main crop. Farming stops where there is not enough rain.

To the east, beyond Lake Baikal, Russia needed most to develop the southeastern cor-

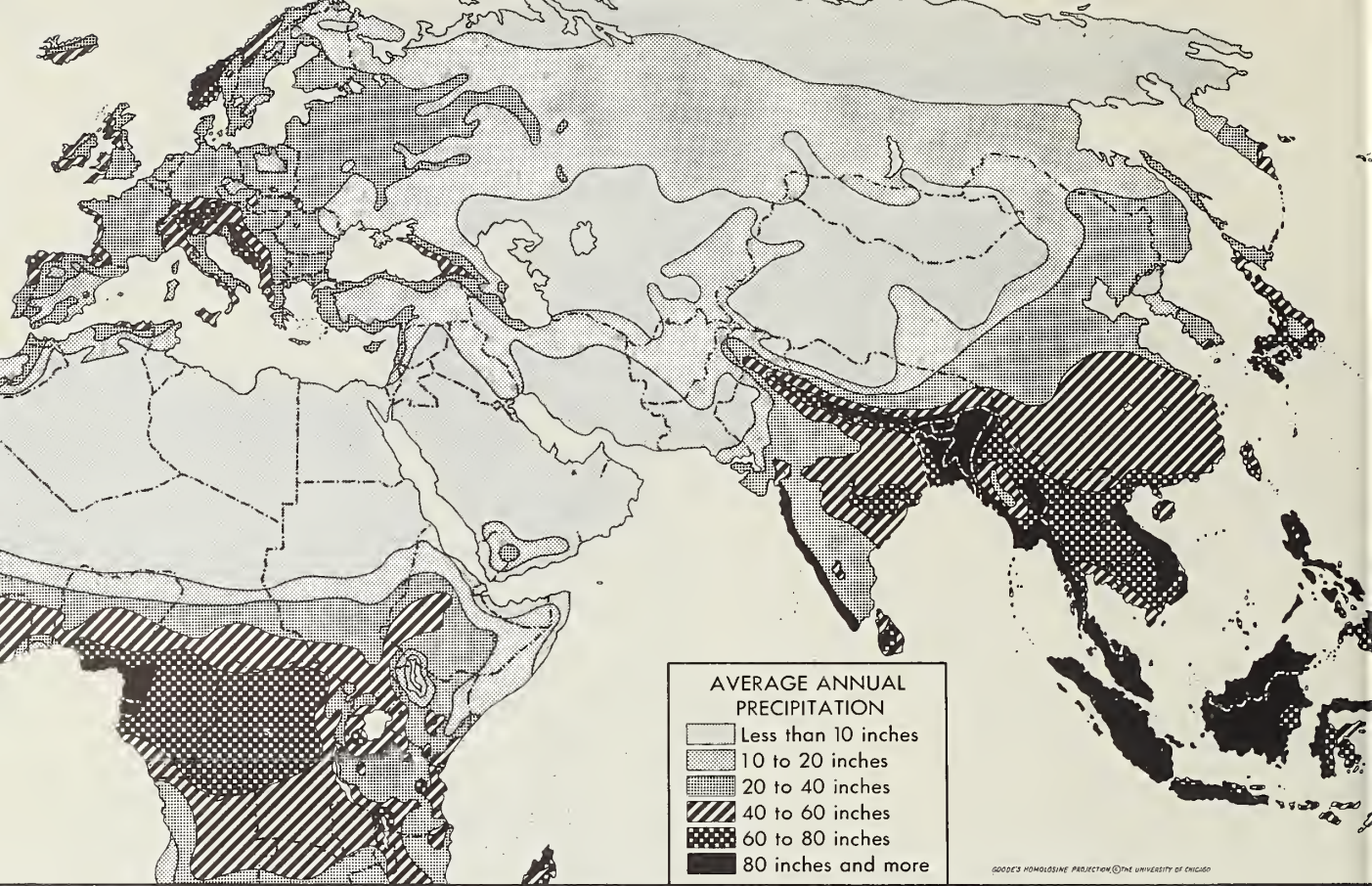


Figure 107. Distribution of rainfall

Figure 108. New irrigation works

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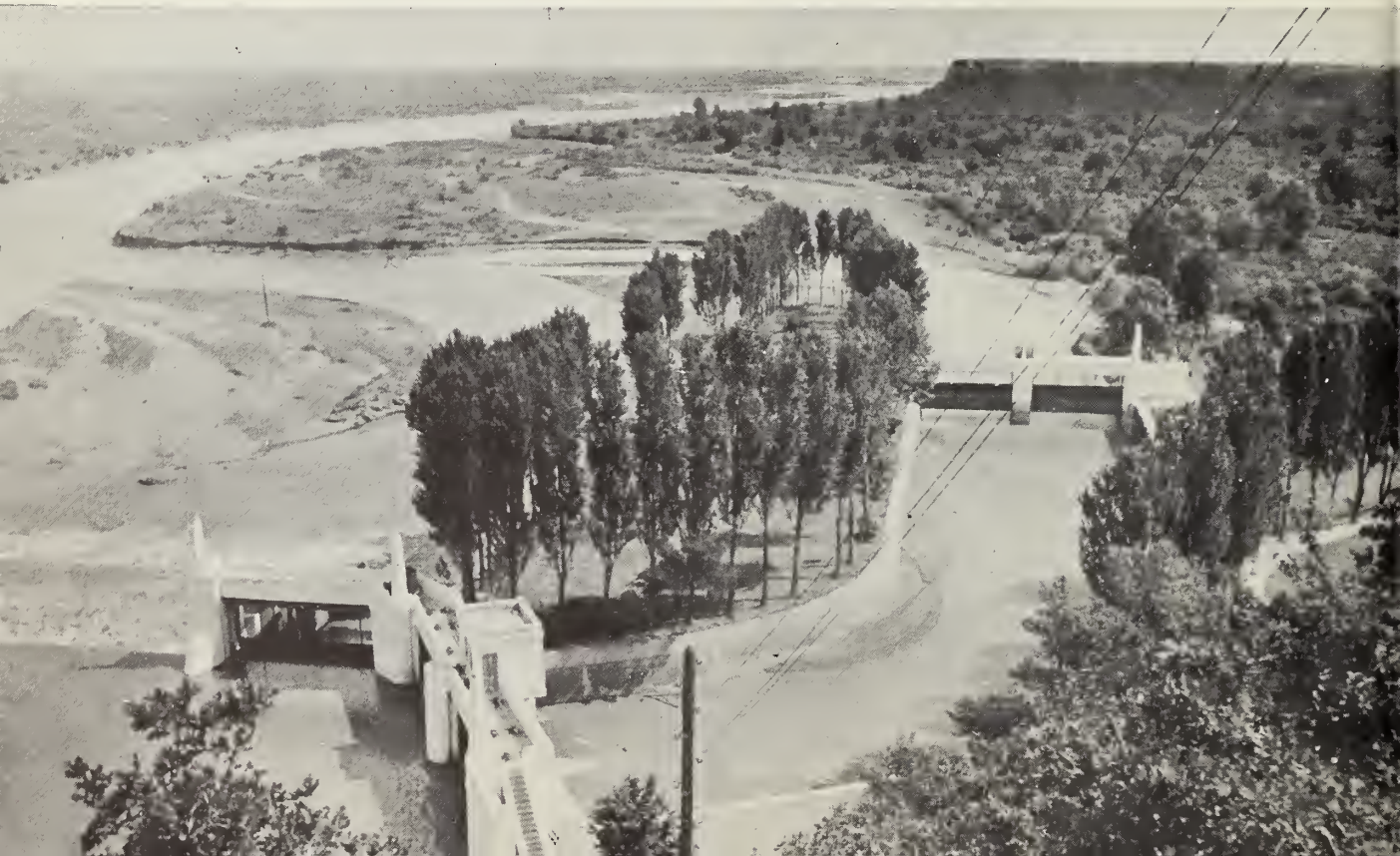




Figure 109. A new industry in eastern Siberia

© Sovfoto

ner of the country. This was the part farthest from the centre of Russian strength. It was the part nearest to Japan, long a rival power (p. 106). Much has been done in the area by the Soviet government.

Many new settlers have been brought in. Big collective farms have been organized in the valleys of the lower Amur River and its branches (Fig. 5). New crops have been introduced. Sugar beets are an example. Figure 109 shows piles of beets at the side of a sugar refinery built by the government. New towns have been founded. New industries of various kinds have been started. This remote part of Russia is now self-supporting.

At the north, farms and experiment stations have been started in the face of great difficulties. There is a collective farm, for instance, near Verkhoyansk, north of the Arctic Circle and east of the Lena River

(Fig. 5). The temperature there is above the freezing point only 74 days a year on the average. Of course, the summer days are very long. That has helped the farmers to grow a special kind of wheat and some vegetables. As in our Far North, the ground never thaws below a few feet. The long winters are bitterly cold. The *average* temperature in January is 59° below zero.

New crops and new methods of farming are being developed at the government experiment stations in the Far North. One of these is called the Frozen Soil Station. In some places, crops are planted only on the southern slopes of hills, in plots behind windbreaks.

The conquest of the Arctic for farming is slowly being achieved, and pioneering there is said to be popular. But we may expect that most of the Far North in Russia, as in Canada, will continue to belong to hardy

natives who live by reindeer herding, fishing, and hunting (p. 112).

Helps in Learning

1. Around Moscow, most of the houses in the farm villages are made of logs. Around Kiev, most of them are built of clay. How do you explain the difference?

2. There has been no logging yet in most of the great Siberian forest south of the tundra. What reasons for this can you give? Where has some logging been done in this forest?

3. A very dry climate in part of Russia and a very cold climate in another part are making the spread of farming difficult. In what part is each of these things true? Tell how the Russians are trying to overcome these difficulties.

4. How, in general, has the Soviet government changed farm life in Russia?

5. Each of the pictures in Figures 104, 105, 106, 108, and 109 shows something that is new in farming in the area where the picture was taken. What is it?

Cities and Industries

Plans. In 1928, the Soviet Government began to carry out the first of a series of five-year plans to develop the country. These plans covered everything—agriculture, mining, transportation, trade, manufacturing, even education.

In manufacturing, greatest effort so far has been put on heavy industries, such as making iron and steel, tanks, and airplanes. This was part of the military program which threatens the world. Under the various plans the people got little for themselves from their labors. Most of them have had only a bare living.

In August, 1953, the government announced that goods for the everyday use of the people must be turned out in much greater quantity and in far better quality. Perhaps the Soviet leaders now feel it necessary to treat the masses of the people with more consideration.

Hopes. The Soviet government has stated that it intends to make Russia the greatest industrial country in the world. It has many millions of workers on whom to call for aid. It has scientists to lead the way. It has rich mineral resources (p. 118). Without these three advantages, the hopes of the Soviet leaders would be an idle dream.

The Russians have not had long experience in making or even using modern machinery. In the time of the first Five-Year Plan, they had to export food they badly needed and raw materials in order to buy machines they could not make. For a while, they had trouble even in setting up and later repairing the machinery they bought. They had to get the help of foreigners. Since those days, the Russians have made great progress. They are eager to learn new things. They recently surprised the world by launching the world's first space satellite and landing the first rocket on the moon.

From country to city. Large industrial growth means more and larger towns and cities. If the new plans are completed, millions of additional people must move to cities. Most of them must move from farms where they now live.

The move from country to city in Russia has been under way for years. Many new cities have been built. There are cities with huge mills, surrounded by the homes of thousands of workers, that stand on ground which was vacant when the movement from country to city began.

Industrial areas. The map in Figure 97 shows the main areas where the plans for industrial development are being carried out. As the map shows, most of these manufacturing areas are also mining areas.

Before the war, most heavy industries were in the areas west of the Volga River. When the German armies invaded that part of the country, the Russians stripped many factories of tools and machinery. They moved the equipment east to the Ural Mountains, or

even farther away. Many other factories in the west were destroyed. The problem there now is chiefly one of rebuilding. Much new development is under way toward the east, in the Urals and beyond, where there is greater security.

In Moscow. Manufacturing in and around Moscow was helped by the position of the city (p. 105), the railroads that lead to it (Fig. 86), the large supply of labor close at hand, and the big market for many goods in the city itself. Textiles, clothing, small metal wares, leather goods, flour and other foodstuffs have been leading products of the city's mills and factories. These are light industries, making consumers' goods. In recent years heavy industries have grown rapidly.

One of the industrial sights is the Stalin Automobile Plant. Figure 110 is an inside view of one of the shops in that plant. Among other large plants is one for making agricultural machinery, and one for electrical machinery.

Much of Moscow has been rebuilt by the Soviets. Apartment buildings and office buildings have been put up. Streets have been widened. Asphalt paving has taken the place of cobblestones. Subways have been built. Parks and playgrounds have been opened. Russians from all parts of the country visit Moscow with pride. It represents to them the source and centre of Russia's strength (p. 105).

Leningrad. There are three reasons why Leningrad is a great city.

First, the city was the capital of old Russia, under the name of St. Petersburg, for two centuries. Government work drew many people there. St. Petersburg became famous for its palaces, churches (now museums), and other fine buildings. Great musicians and writers added to its fame.

Second, the city became the commercial doorway for most of European Russia and even for western Siberia. Canals were built



Figure 110. In the Stalin Automobile Plant © Sovfoto

to connect it with the Dvina River, flowing into the White Sea, and with the Volga and Dnieper rivers, flowing to the southern seas. Its trade connections were greatly improved, too, by railroads (Fig. 86). Railroads were built for military use, rather than for trade, but they served both purposes. While the city was still young, foreign traders flocked to it. Ideas, as well as goods, were exchanged. Visitors were welcomed in those days. St. Petersburg, once a little village in a marshy delta, became a world city.

The third reason for the growth of St. Petersburg, now Leningrad, was manufacturing. Textiles, clothing, shoes, and chemi-



Figure 111. A famous street in Leningrad

© Sovfoto

cals are among the older products made. The value of all products is second only to that of the products of Moscow. At the time of the revolution, St. Petersburg had more skilled workers than Moscow, or any other place in Russia. The old government had located various industries there, and men had been trained in them. Under the first Five-Year Plan, many of these workers were sent out to start industries in other places.

The greatest natural advantage of St. Petersburg was its general location. There were disadvantages. Winter ice in the harbor and the long, insecure water route to western Europe were disadvantages (p. 108). Then, too, the city was built on low, swampy ground at the mouth of the Neva River (Fig. 86). The early buildings rested on piles. Millions of piles were driven into the soft

earth. Occasional floods, due to westerly gales from the Gulf of Finland, caused great damage. The delta of the river was cut up by branch streams and by islands. In time, hundreds of bridges had to be built. Almost all delta cities have had special problems to solve.

Figure 111 shows part of a famous street in Leningrad. All the streets are as level as this one. Many of the bridges are as fine as this one. The buildings, some of which still bear the scars of war, are not as modern as those in Figure 112.

Some southern cities. Several cities in the south have important industries. Among these cities are Kiev and Kharkov, Rostov and Stalingrad (Fig. 86). They are near deposits of coal, iron, and manganese (Fig. 97). They are surrounded by rich lands that have a large population. Mineral wealth and

agricultural wealth led to large-scale manufacturing.

Next to the giants, Moscow and Leningrad, Kiev is the largest place in Russia. The city stands on hilly ground overlooking the broad Dnieper River, which is a busy highway. Kiev is probably the most beautiful city in Russia. It has quaint stone buildings put up centuries ago, and fine new buildings such as those in Figure 112.

In old Russia, Kiev was a great religious centre. It was visited every year by several hundred thousand religious pilgrims. Every year, too, many people visited the famous fair at Kiev. Trade with the surrounding country, the most productive in all Russia, is even now more important than manufacturing in Kiev. However, the city has large industries. The one that is best known is the manufacture of beet sugar. Boatbuilding is an old industry in Kiev, as one might expect.

Kharkov is almost as large as Kiev, though much younger. Its heavy industries are most important. Tractors, farm machinery, and locomotives are examples of its products.

Rostov, on the Don River, is another centre of heavy industry. It makes much farm machinery.

Stalingrad, reduced almost completely to ruin in World War II, has been largely rebuilt. With a population of over half a million people, Stalingrad is one of Russia's most important manufacturing centres. Stalingrad's factories make munitions and tractors and other heavy machinery. It is also an important educational centre.

Industry in the Urals. Chimneys are smoking in the skies along the Urals at many places. Scenes like that in Figure 113 are becoming more and more common. The present Five-Year Plan calls for enormous developments in the region. New steel mills are going up. New plants for getting various other metals from their ores are under way.



Figure 112. Modern buildings in Kiev

© Sovfoto

The Urals have the greatest industrial possibilities in Russia. These old mountains, worn down to rounded hills, are a storehouse of mineral riches (Fig. 97). Coal is mined in them, and also many ores, including iron, manganese, copper, lead, zinc, nickel, aluminum, magnesium, gold, and silver. Many plants are needed to treat the different ores on a large scale.

In the Urals or on their borders, there are now at least eight industrial cities with populations of more than 100,000. The city where the plant in Figure 113 is located, Magnitogorsk (Fig. 97), grew from nothing to nearly 300,000 in less than thirty years. The largest of all, Sverdlovsk (Fig. 97), in



Figure 113. Smoky skies over Magnitogorsk © Sovfoto

which the picture in Figure 114 was taken, is Russia's chief steel centre.

The fast-growing metal industries of the Urals have not been without drawbacks. Some of the ores are not as good as expected. The region lacks coal suitable for coking. Large amounts of good coal must come from other areas.

The best coal deposits in Russia are about 1200 miles east of the Urals, on a branch of the Trans-Siberian Railroad (Fig. 97). That is a very long way to take iron ore to coal, the usual thing (p. 83), or coal to iron ore. The Soviet government built blast furnaces at both ends of the connecting rail route, in the Urals where there is iron ore and in Siberia where there is good coal. Trains carry coal west. They carry iron ore back east. They are loaded both ways.

A few years ago another source of coal

was found for Ural industries. These new coal deposits are farther south, but much nearer to the industrial cities in the Urals (Fig. 97). A railroad has been built to them. The coal beds are only a few feet below the surface. No mine shafts are needed. After the cover of earth is removed, the coal is scooped up with big shovels and loaded directly into freight cars. Figure 115 shows one of the big shovels at work.

In Siberia. New settlements are being made in Siberia (p. 129). New industries are being started to support these settlements, and to strengthen Russia's frontiers.

The centre of the most important industrial area in Siberia is at Stalinsk (Fig. 97). It is there that iron and steel mills were built to use local coal, and iron ore from the Urals. Now, some of the iron ore used by the mills is mined within 100 miles of Stalinsk. Lead, zinc, copper, tin, gold, and silver also are mined in the area. The greatest resource is the coal, enormous in quantity and high in quality.

The development of this area by the Russians may, in some ways, be a greater feat than the development of the Ural area. This area is much more remote. A million people now live where formerly a few nomads roamed. Modern cities have replaced open grasslands. The blast furnaces and rolling mills are among the largest anywhere. Busy factories use the iron and steel to make machines and tools and other things. Some of the mines that form the base for all this activity are electrified, and have up-to-date equipment.

A Final Word

Russia has great advantages. It has a vast area with mighty rivers, immense forests, and rich mineral resources. It has the third largest population in the world. It has made rapid progress in agriculture and industry.

Russia also has serious disadvantages.



Figure 114. On Lenin Street in Sverdlovsk

© Sovfoto

Most of its land is not good land, because it is so cold, so dry, or so infertile. It is not in close touch with the great ocean highways. It has long frontiers to guard.

While many improvements have been made, Russia still has far to go in improving the living conditions of the people. For example, millions of homes are as simple and rough as the one in Figure 116.

A serious question. The world is asking—how will the rising strength of Russia be used? It is clear that the revolution which removed the Czar did not win freedom for the Russian people. They do not have the western ideas of freedom of speech, press, and religion. They live under the absolute control of a few leaders in the Communist party, who have recently shown more willingness than in past

years to cooperate with other nations in preventing war.

Nevertheless these leaders have not given up aiding Communist parties in other countries. They have also brought severe pressure on neighboring countries to establish governments friendly to Russia. Some observers believe that the Russian Communists hope to win world influence by economic means only. Others say that this is only partly true, for the Russians are prepared to go to any lengths to dominate the world. Knowing that this would mean the loss of liberty, the free peoples of the world are determined that this shall not happen. Yet communism has much appeal for the non-western peoples of the world. These are among the world's most pressing problems today.

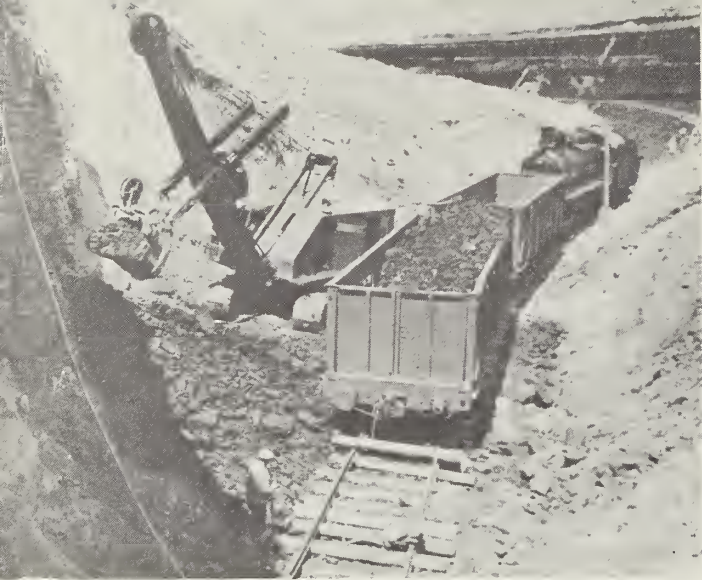


Figure 115. In a new open-pit coal mine © Sovfoto

The facts are hard to get. Unfortunately, it is not easy for people living outside Russia to find out what is really going on there. Russia permits few travellers, students, or newspapermen to travel about freely and observe for themselves how the Russian people are living. Also, very few people from other countries have the opportunity to talk with individual Russians and learn what they think about the Soviet Government, or the Communist system under which almost all property is owned by the state.

Without doubt there have been improvements in the standard of living of many of the Russian people. They have learned much from the West. But recent Russian advances in science and technology, as we have seen, have been very impressive. The West can no longer brush aside as idle boasts Russian claims that their standard of living will soon equal that of the United States.

But no one knows how *much* the standard of living has been raised among the people in general. And no one knows the extent to which the Russian people enthusiastically support their government. It might be a very dangerous mistake to assume that millions of Russians resent being forced to live under the Communist system and would revolt if given an opportunity. The Russian people

have never had much freedom of choice as to their way of life or the kind of work they would do. For centuries they have had almost nothing to say about the kind of government under which they must live. The Russians today, therefore, may not feel their lack of freedom as keenly as would people who have been free to choose the kind of work they would do and who have had the right to help choose their leaders in government.

We do not know how far the Russian leaders are prepared to go in spreading Communism over the world or in bringing other lands under their control. We do know that Communism, as the Russians know it, allows little freedom for the individual. And we can be sure that the ideas which the Communist leaders are seeking to spread are not those which can be accepted by the freedom-loving peoples of the world.

Helps in Learning

1. Why is Leningrad "the least Russian of Russian cities"?
2. The picture in Figure 111 was taken in the autumn of 1945. How does the picture itself show that it was not taken in summer? in winter?
3. Do you think that Leningrad will catch up with Moscow in size? Why, or why not?
4. Much of the wheat exported by Russia in the past (p. 120) was shipped from Odessa. Why?
5. In the days of the Czars, household and village industries were more important than those carried on in factories and mills. Do you think the long winters helped, or hindered, the household and village industries? Why? Some villages in European Russia specialized in making casks, carts, and other things from wood. In what part of the country do you think these villages were? Why? Other villages specialized in making sheepskin coats or rugs. Where, in general, do you think these villages were? Why?
6. Both Tashkent and Moscow (Fig. 97) have cotton mills. Which do you think is the better place for such mills? Why do you think so?



Figure 116. In a Russian home, eastern Siberia

© Julien Bryan

7. What part of Russia provides the greatest market for consumers' goods? Why?

8. At present, Russia is developing heavy industries. What is the reason for this? Various heavy industries are mentioned in this chapter. How many can you name? Which pictures show work connected with heavy industries?

9. Russia is spreading out its manufacturing plants. What reasons for this can you give?

10. Some people think that the greatest industrial area of the future in Russia will be the one in the Ural Mountains (Fig. 97). What reasons can you see for this belief? What reasons can you see against it?

11. Most of the mineral resources of the Urals, if not all of them, have been known for several centuries, but large use of most of them began about twenty years ago. Explain why.

12. Suppose you were helping to decide the location for a big new manufacturing plant,

to be built either in Russia or in Canada. What facts would you want to know before making your decision?

13. Why is it much less important for Russia to export manufactured goods than for Britain to do so?

14. Russia and the United States are among the strongest of the "Great Powers" (p. 20). What likenesses and differences between the two can you give?

15. Russia sometimes is compared with Canada. What likenesses and differences between the two countries can you name?

In which country do people have little individual freedom? Tell why.

16. Suppose you had to give a talk to your classmates on either "The Farms and Forests of Russia" or "The Mines and Mills of Russia." Which subject would you choose? Why? What would you say in your talk?

CHINA

Civilization in China. The first chapter in this book told of ancient civilizations near the Mediterranean Sea (pp. 1-3). There, along great rivers, men settled down to farming, and built towns and cities. Trade grew up between one settlement and another. Men invented simple tools and learned to write. So began western civilization, the civilization of Europe and the Americas.

Much later, but still in ancient times, another civilization developed, far to the east across the vast continent of Asia. There, too, in a land now called China, men settled down to farming, and learned to write, and began to work with tools. This was the beginning of Chinese civilization.

These Chinese knew nothing of the earlier civilization that had grown up near the Mediterranean. Isolated from the rest of the world, the Chinese went their own way for many centuries. The new things learned in Europe, while civilization was taking shape there, stayed in Europe. The new things learned in China stayed there. It is only natural, then, that even today the civilization of China should be different from ours.

Through Many Years

Isolated China. Barriers of ocean, mountain, desert, and distance long isolated China and its civilization from the rest of the world. The ocean barrier was the Pacific, to the east of China (Fig. 117). In ancient times, no ships sailed across this vast expanse of water.

The map on the opposite page shows part of the mountain barrier which shut off China from lands to the south and west. This highland area includes the highest peaks in the world.

Northwest of China, there is a vast desert

barrier which has always made travel difficult and dangerous. Figure 107 shows that this dry land reaches almost all the way across Asia, to the Mediterranean Sea.

The people of Europe live to the north and west of this desert belt. They belong to western civilization. Most of the people who live within the desert and to the south of it belong to eastern, or Asiatic, civilization. This desert belt, then, was a barrier between the East and the West.

Distance was the fourth great barrier which isolated China. As the map of Eurasia shows (Fig. 5), China is at one end of a huge continent. Europe is at the opposite end, several thousand miles away. In the days when the fastest kind of travel was on horseback, China and Europe were four or five months apart.

In spite of these barriers, China was not entirely sealed off from her neighbors in the Orient, or from the western world. Some goods moved from trader to trader until they arrived in Europe (p. 9). A few ships crept back and forth along the coasts of eastern Asia. Certain ideas about religion were carried overland to China from India.

For centuries there was conflict between the Chinese people and the nomads who lived in the dry barrier lands to the northwest. Even in ancient times, the nomads occasionally attacked farm villages in the river valleys of China. The Chinese tried to keep out the nomads by building a great wall about 1500 miles long. As Figure 117 shows, it reached all the way across northern China, from the sea to the mountains on the northeastern border of Tibet. Figure 118 shows a section of the Great Wall. Of course, the wall would have no value today in keeping out invaders.

East meets West. In the 16th century European traders came to China by sea (p.



SOUTHEASTERN ASIA
MAINLAND AND ISLANDS

Miles
0 100 200 300 400 500

SYMBOLS FOR CITIES

- More than 1,000,000
- 500,000 to 1,000,000
- 100,000 to 500,000
- Other Selected Cities
- ☉ Capitals
- Principal Railroads
- - - Canals

ELEVATION IN FEET

- More than 10,000
- 5,000 to 10,000
- 2,000 to 5,000
- 1,000 to 2,000
- 500 to 1,000
- Sea Level to 500
- Below Sea Level



Figure 118. The Great Wall—once a stout defence, now useless

© White Brothers

10). New inventions, such as the compass, had made voyages across the oceans less difficult and dangerous. The oceans had become highways. The almost complete isolation of China was gone. New inventions and European expansion had destroyed it (pp. 7-11).

Few of the Chinese were interested in trade when the first foreign ships arrived. It is said that the Chinese emperor sent word to the king of England that the Chinese had everything they could possibly use and did not wish to trade with England. For years it was hard to find any goods that the Chinese would accept in exchange for such products as tea and silk. Many things made in Chinese workshops were better than the goods which the foreigners brought. The Chinese looked upon foreign traders as barbarians, and believed little was to be gained by trading with them.

A struggle for China. A great scramble for land and influence in China got under way a little more than a hundred years ago. For a time it looked as though China would be divided among the rival nations. The Chinese civilization was highly developed in art, literature, manners, and fine handmade goods. But the Europeans were much more powerful. They had big guns, and their ships were far better than any which the Chinese owned.

In 1842, after a brief war with China, Britain got the island of Hong Kong (p. 68). Later, China lost Formosa (Fig. 117) to Japan. Finally, in 1946, Mongolia broke away. In spite of these losses, China has survived as an independent country, and a big one.

China today. China is big in several ways, big in area, big in resources, big in population. In area, China is as large as all Europe. Next to Russia, it is the largest country in the

world. In farm lands and in certain mineral resources China is one of the leading nations.

It is estimated that about 650 million people live in China. This is more than thirty times as many people as there are in Canada. It is largely because of these hundreds of millions of people that China has been counted as one of the "Five Great Powers" in the world (p. 20).

China today is "The Republic of China." It became a republic in 1911, when a revolution ended the rule of the Chinese emperors. This revolution did not, however, provide a strong government. Much of the time since 1911, two or more groups have been quarrelling. Recently, the Chinese Communists, or the People's Party, gained control of all China Proper, except Formosa. This island,

long under Japanese rule, was restored to China in 1945. It is the only part of China held by Chinese foes of the Communists.

There has never been much trade between the People's Republic of China and the countries of North America. What is going on in mainland China today is as much a mystery as in any other country over which the Communists have gained control.

Five regions. The name Greater China is often given to Chinese lands as a whole (Fig. 5). This wide-spreading country may be divided into five regions, China Proper, Manchuria, Inner Mongolia, Sinkiang, and Tibet.

China Proper is by far the most important region in Greater China. As Figure 119 shows, it is the largest region. It has most of the farm lands, nearly all the minerals, and the capital.

[141]

Figure 119. Regions and people



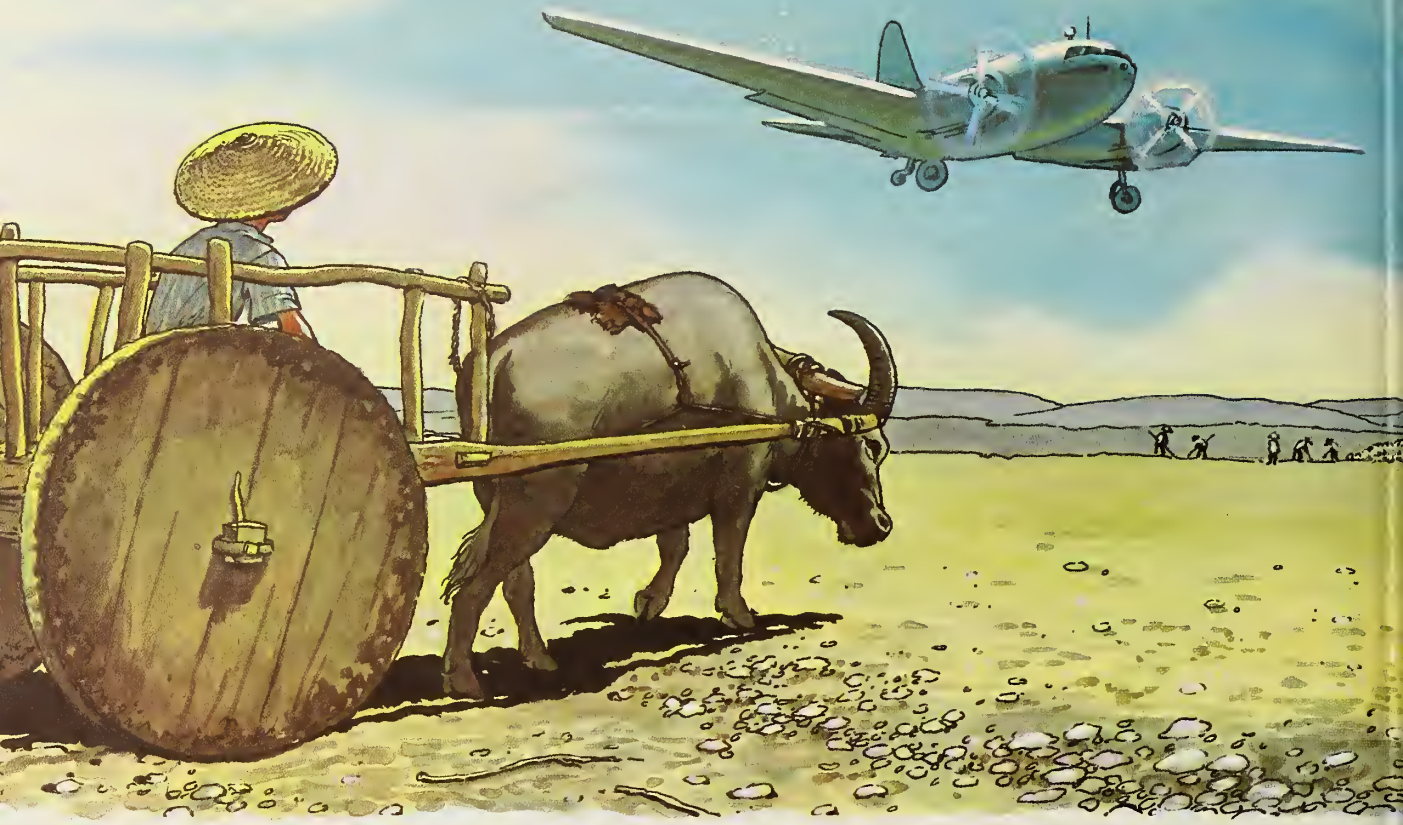


Figure 120. Two ways of travel: primitive and slow, modern and swift

Above all, as Figure 119 shows, China Proper has most of the people. By comparison, few people live in the four other regions of Greater China.

New ways, old ways. In all five regions of China many things have changed since the people of the West first sailed to the East. The first European traders came to China by sea. The newest road to China is the highway of the air. In Figure 120, an airplane is about to land at a Chinese airfield. A few hours before, the plane was in India, 1000 miles away. The barrier mountains which once did so much to isolate China were crossed in less than four hours.

Of course, few people within China ever travel by plane. Most Chinese live in quiet, out-of-the-way villages, far from any airfield, railroad, or highway. The village shown in Figure 121 is one such village. Now and then a plane may fly overhead, but airplanes mean little to most of the people. No one in the village could afford a trip by plane, even if

the plane could land near-by. The man in the cart in Figure 120 cannot afford to fly either, although he lives near the airfield and helped to build it.

Before World War II, China in many ways was a new China, largely because of the influence of the West. Little by little, new ways of thinking were creeping in. There were new ways of living.

Now that the Chinese Communists are in control of the country, many other changes are taking place. As in other Communist countries, the changes may not bring much freedom, as we know it, to the individual. The outside world knows little of what is going on in China today.

Helps in Learning

1. Use Figures 5 and 117 in explaining why China was isolated from the rest of the world.
2. Why was China less isolated before World War II? How did this change Chinese life?

3. Does the Great Wall follow the present boundary of China? Is it built over lowland or upland most of the way? Why is it no longer important in the defence of the country?

4. Using Figure 5, compare the size of China with the size of Russia. Is China as a whole more thickly peopled than Russia? How do you know this?

5. Which are the most thickly settled parts of China—the lowlands, or the highlands?

6. Which region of Greater China has most people (Fig. 119)? Which region ranks second in population? What reasons for these facts do Figures 107 and 117 suggest to you?

7. How does Figure 107 suggest that China Proper is a better land for farming than is most of the rest of Greater China?

8. Now that the Communists are in control of the whole of mainland China, would you expect that the people of the free world would know much about what is going on there? Why, or why not?

In South China

North and South. Although we may think of China Proper as one region, life is by no means the same in all parts of that region. We should, of course, expect some differences. The southern tip of China Proper reaches into the tropics (Fig. 117). Peking, in the northern part, is as far from the equator as is Philadelphia. In China Proper the warmer lands, south of the Hwai River and the Tsingling Mountains (Fig. 117), are called South China. The rest of China Proper is called North China.

Two of China's three great rivers are in South China. They are the Yangtze Kiang and the Si Kiang (Fig. 117). The great river of North China is the Hwang Ho. In Chinese, the words "Kiang" and "Ho" mean river.

Shanghai and the Yangtze. Shanghai, often called the gateway to China, is in South China,

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Figure 121. Like thousands of other villages





Figure 122. The great seaport of a great valley

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near the mouth of the Yangtze Kiang (Fig. 117). Until about a hundred years ago, Shanghai was little more than a fishing village on a mud flat in the delta. Today, Shanghai is China's largest city. Its population is more than seven million, making Shanghai also one of the world's great cities.

The picture shows part of the business district of Shanghai. Where fishermen once spread their nets to dry, there now is a wide boulevard and a line of steel and concrete buildings. Facing the boulevard there are fine hotels, motion-picture theatres, air-conditioned shops, and modern offices. Elsewhere in the city, thousands of people live along dark and narrow streets. Each year millions of tons of cargo move through the Shanghai harbor, where at one time there were only fishing boats.

Shanghai owes part of its greatness to the

foreigners who began coming there about a hundred years ago. Before long, Shanghai had banks and trading companies, warehouses, and harbor equipment. The city also owes something to its location near a main highway of ocean trade, and to its middle position on the coast of China. But Shanghai probably owes most of its greatness to the Yangtze Kiang and to the rich Yangtze Valley.

The Yangtze Kiang is a wonderful highway. Many Chinese call it "The Great River." It is one of the great river highways of the world. A never-ending parade of boats moves upstream and downstream. Many of these are steamboats and for every steamboat there are hundreds, perhaps thousands, of small craft on the main river or its branches. Shanghai is connected by water with almost all of the Yangtze Valley.

The Yangtze Valley is both a source of raw

materials and a huge market for Shanghai. About 200 million people live in the valley. This is more people than live in the United States. It is about one-tenth of the people in the world. No other city, in any country, is the gateway to so large a population.

A living in city and village. In kinds of work, Shanghai has much in common with large cities everywhere. Most of the people make a living from trade or transportation or manufacturing. As in cities everywhere, these people can live only because other people are working in other cities, in towns and small villages, and on farms.

Farming is China's leading industry. During the last decade, the Communists introduced revolutionary changes in agriculture. At first, they broke up the large farms, giving the land to the farmers who cultivated it. Then, by force if necessary, they persuaded the farmers to bring their lands into co-operatives. Now they have set up the commune system, under which farmers are brought together to work on the land.

Kaihsienkung. The next few pages describe life in a Chinese village called Kaihsienkung, as it was lived before the Communist revolution. It is in the Yangtze delta about 80 miles west of Shanghai and less than two miles from Lake Tai (Fig. 117). No road connects it with the outside world.

About 360 families live in Kaihsienkung. There is no spot from which all their homes can be seen at once. In all the great delta the land is low. The houses on the delta stretch in long lines along both banks of the streams.

Nearly all of the people in the village are farmers. Altogether they have only 460 acres. That is about as much as *three* ordinary farms in Ontario. Yet in Kaihsienkung *more than 300 farm families* must make a living from the 460 acres. Each farmer has very little land. Moreover, the land which a farmer works may be scattered here and there in uneven little patches. This makes farming even more difficult.

Rice farming. The leading crop in Kaihsienkung is rice. In summer, nearly every acre is planted to it. Rice is well suited to the needs of the village people, for no other grain produces so much food per acre.

In May or June, a farmer sows kernels of rice close together in a little plot in a corner of the field. As the rice grows, it looks like a thick green mat. At this time, the crop does not need much space. It does need special care, however, particularly in irrigation.

While the young rice is growing, the farmer prepares the rest of the field. With a heavy iron hoe he breaks the soil and then smooths the surface. Farmers in some of the neighboring villages use water buffaloes and plows for this work. In Kaihsienkung there are no plows and no work animals.

In late June or early July, the village people say they are very "busy in farm." This is the time when the rice plants are dug from the corner plot and transplanted in the main field. For weeks every farmer works from dawn till dark, setting out row after row of young rice plants. Later in the summer the farmer must go through his fields, pulling out the weeds by hand.

By late October the rice fields have turned from green to yellow, and harvest begins. This also is hand work. The farmer cuts the rice with a long curved sickle, gathers it into bundles, and carries it to an open space near his house. He threshes it by striking a bundle at a time over the edge of a box. The kernels of rice, separated from the straw, collect in the bottom of the box. The straw is piled in a stack. Figure 123 shows several stacks of rice straw along the river bank. In other villages in South China, the farmers may thresh in some other way. But everywhere threshing is largely hand work.

Irrigation. Farmers in Kaihsienkung say that water is the most important thing on the farm. The rice plants will die if the soil gets too dry. They also will die if the water gets too high and stays that way. Keeping the

water in the fields at just the right level is a difficult task.

The picture in Figure 124 shows how hard it is to irrigate the fields. There is plenty of water in the river, but the level of the water is below the level of the fields on both sides. So the precious water must be pumped up over the edge of the river bank.

Each "irrigation pump" in the picture is a long three-sided trough, with a row of square paddles in it. Two farmers turn the wheel at the top. The wheel moves a chain to which the paddles are fastened. This moving chain of paddles pushes water up through the trough. Some of the water leaks back, past the loose-fitting paddles. Yet, little by little, the ditches above the river bank fill with water. With plenty of water, the thirsty crop grows well in the hot sun.

Not all the water for the growing crop is

supplied by irrigation. The summer monsoon rains also help. For brief periods in summer, there may be enough rain for the rice. Once in a while it happens that there is too much water in the fields, because of unusually heavy rains. Then the farmers must hurry to pump water out of the fields and into the river.

Recently two irrigation pumps run by engines were set up near Kaihsienkung. By paying a small fee, a farmer can have water pumped to his fields, while he looks on. So far, however, few farmers have taken advantage of this new machinery. Most farmers cannot pay even the small fee that is required. The use of a power pump is a luxury that almost no one can afford.

Winter crop. In winter, some of the better-drained land outside Kaihsienkung is used for wheat. Soon after the rice is harvested, the

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Figure 123. Kaihsienkung, a quaint Chinese village near Shanghai



farmer again goes to the field with his heavy iron hoe, and prepares the soil. The wheat is planted in November or December, and harvested in March after the dry winter. The work of the wheat harvest is much like that of the rice harvest. Of course, wheat does not need nearly so much water as rice, either from rainfall or irrigation.

It is fortunate for the people of Kaihsienkung that winters are mild enough so that a second crop can be grown each year. In this way some of the farmers get extra food from their few acres of land. In winter, the temperature is below freezing on only a few days. There is seldom any ice or snow.

Year-round work. During most of the year the farmers are busy. At one season or another, fertilizer is carefully spread over all the land. Chickens, ducks, and pigs must be cared for. The pumps and ditches and dikes

must be looked after. Nearly every family grows some vegetables, such as cabbages, potatoes, and turnips. Many farmers also grow mulberry trees, the leaves of which are fed to silkworms.

Recently some of the farmers in Kaihsienkung began to raise a few sheep. They cannot raise many, for there is no pasture land. The sheep are kept in pens or small huts near the houses. They are fed on grass which the children collect along the steep banks of the stream or in other places where crops cannot be grown.

Since children are needed for this task and for other farm work, few pupils attend the village school. Most of the villagers can neither read nor write.

Buying and selling. After each harvest, the farmers in Kaihsienkung carefully measure the grain which they have grown. Each farm-

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Figure 124. Hard work in lifting precious water





Figure 125. In a market town for many villages

© C N S Photos, Paul Guillumette, Inc.

er sets aside for food just enough to last until the next harvest. This usually is about half the crop. The rest he must sell in order to get money to pay rent or taxes. He also needs money to buy salt, sugar, cloth, and a few other things which he cannot produce on his farm.

In 1956, twenty years after this study of Kaihsienkung was made, a western scholar visited the village and found that rice yields had almost doubled. He thinks that the increase is due to the ploughing of new land, better planting methods, the use of more tools and animals, and the commune system.

The picture shows the main street of a town much like a market town near Kaihsienkung. Baskets in the foreground are filled with cabbages and other farm produce. Hats, suits, cloth, and other merchandise are displayed in the open, where anyone passing by can see them. It may well be that most of these things were made in Shanghai.

Village industries. When the extra grain is sold and the money is counted, the ordinary farmer in Kaihsienkung finds that he still has not made enough so that he and his family can live through the year. Unless someone in the family does some extra work, they can-

not get along. Throughout China it is much the same. Most farmers cannot make a living from their crops alone. In many places village industries provide extra work for farm people.

In the area around Kaihsienkung, the silk industry has been important for at least a thousand years. Recent changes in the silk business have brought serious problems to Chinese farmers. Some of these changes took place thousands of miles away. In Europe and America, for example, rayon and nylon began to take the place of silk. Also, within China, there was a change in the methods of weaving silk cloth. For hundreds of years, cloth was woven in homes and little workshops. Now, most of it is woven in factories in the cities.

In Kaihsienkung there is still a loom in nearly every house. Yet very few of them are used, for most factory-woven silk is better and cheaper than silk cloth woven by hand. Even the cotton cloth in a Kaihsienkung farmer's suit is made in a distant factory, perhaps in Shanghai.

Changes in the silk industry are important to many people besides farmers in Kaihsienkung. These changes concern the tailor, the carpenter, the fisherman, the barber, and the basket maker. They are some of the few village people who do not work regularly in the fields. When farm families can get extra work for good pay, more suits of clothes are made, more fish are sold, and more roofs are repaired.

Elsewhere in South China. Many of the things said about Kaihsienkung might also be said of thousands of other farm villages in the Yangtze Valley, and elsewhere in South China. Crops vary somewhat from place to place. The Yangtze Valley is an important cotton-growing area, although no cotton is grown in Kaihsienkung. Here and there in South China, farmers also grow such crops as barley, corn, beans, or sweet potatoes. But almost everywhere, irrigated rice and winter wheat are the leading crops.

In most villages in South China there are industries of one kind or another. In some, there are silk industries. In other places, people may make baskets or paper or shoes.

Since it has been in power, the Communist government has made a great effort to control the simple home industries. As a result, many of the workers can no longer decide what to make.

The delta of the Si Kiang, like the Yangtze delta, is a thickly peopled area (Figs. 117 and 119). In the Si delta, the irrigation canals, rice fields, and rows of mulberry trees look much like those in the Yangtze delta. Yet there are some important differences in farming. For example, the growing season in the Si delta is so long and the winters are so mild that two crops of rice are grown each year.

Most of the land between the Si Kiang and the Yangtze Kiang is hilly or mountainous (Fig. 117). There is little level land, except in narrow river valleys. Wherever level land and water for irrigation are found together, Chinese farmers are at work. In some places, farmers have built terraces on the slopes, in order to get more land on which to grow more food. From a distance, the terraces look like huge stairways on the mountainsides.

For many years, tea was an important cash crop in this hill country. At one time, China led the world in producing tea. Recently, however, China has lost much of its tea trade. One reason is that more popular tea is now grown in India and other places.

The picture on page 150 shows a narrow valley in the hill country between the Si and the Yangtze. A farmer is using a water buffalo in plowing a rice field. The ditches beside the flagstone path are irrigation ditches.

Here and in most of South China, transportation is little developed. No automobile has ever been in the valley in the picture. The nearest railroad is many miles away. So people travel on foot, or by boat where the streams are navigable. Those who can afford it may travel by sedan chair, as in the picture.

This is difficult travel, both for the men who carry the sedan chairs and also for their passengers.

In much of China nearly all the trees were cut down long ago. However, there still are scattered patches of forest, as the picture suggests.

Mineral resources in South China. Valuable minerals are found in South China. Some iron ore is mined along the Yangtze. In scattered places, miners dig for antimony, copper, tungsten, tin, and zinc. Copper was mined in South China and used in Chinese coins perhaps two thousand years ago.

Though valuable, the mineral resources are small when compared with the resources of land and water.

Helps in Learning

1. Give at least three reasons why Shanghai has grown into a great city.

2. What is meant by "Shanghai—the gateway to China"?

3. Tell four ways in which Kaihsienkung is different from most farm villages in our country.

4. In what way or ways are people in Kaihsienkung dependent on workers elsewhere in China? How does work in Kaihsienkung make a difference to people in Shanghai?

5. Why do only a few of the farmers in Kaihsienkung use a power pump to irrigate their fields?

6. Why is rice a desirable crop in a crowded country where farm land is scarce?

7. By what means could one travel from Kaihsienkung to Shanghai?

8. How may manufacturing in Shanghai both hurt and help the people of Kaihsienkung?

9. How have changes in the textile industry in Europe and America affected the people of Kaihsienkung?

10. In what ways would you expect farming in North China to differ from farming in South China? Why?

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Figure 126. Farming in South China





Figure 127. Farming in North China

In North China

Contrasts in farming. The picture in Figure 127 is a farm scene near Tientsin. This city is in North China, that is, in the part of China Proper north of the Tsingling Mountains and the Hwai River (Fig. 117). The picture taken near Tientsin and that in Figure 126 do not look much alike. One farmer uses a water buffalo. The other has a team of oxen. In one picture, a man is plowing land that is under water. In the other picture, the land is dry and the walls are made of sun-dried brick.

The two pictures suggest a difference in rainfall. As Figure 107 shows, most of North China has an annual rainfall of between 20 and 40 inches. In most of South China, there are between 40 and 60 inches of rain each year.

Warm and rainy South China is rice country. In cooler, less rainy North China, wheat,

millet, and a grain called kaoliang take the place of rice for food. Many millions of Chinese living in North China eat rice very seldom, if at all.

In much of North China the summers are warm enough and long enough for rice to grow and ripen. Little irrigation has been developed there, however, and rice needs much more water than the normal rains supply.

The Yellow Plain. North China includes three kinds of land—the mountainous Shantung Peninsula, the wide delta plain of the Hwang Ho, and the highlands west of the delta (Fig. 117). The delta reaches the sea both north and south of the Shantung Peninsula.

In Chinese, Hwang Ho means Yellow River. It was so named for its muddy waters. On many occasions, winds blow great clouds of yellow dust across the delta plain. Travelers tell of dust-covered houses and walls, and even of trees which look yellow. So the



© Julien Bryan, from *Sawders*

Figure 128. Harvesting kaoliang

Hwang Ho delta has come to be called the Yellow Plain.

As Figure 119 shows, most of the people of North China live on the Yellow Plain. Actually about 80 million persons make their homes there. In North China, as in South China, the lowlands are crowded.

Farming in the Yellow Plain. On the whole, farming in the Yellow Plain is dry-land farming. Winters are cold and dry. Much less than half of the farm land is used for growing a second crop.

The farm shown in Figure 127 is about twice the size of an ordinary farm in South

China. In drier, cooler North China, it takes about twice as much land for a farmer to make a living. Yet the average farm on the Yellow Plain is small. It contains only about six acres.

Oxen, donkeys, and mules are common farm animals, although many farms have no work animals at all. In North China, as in South China, much farm work is done by hand. The picture in Figure 128 shows how kaoliang is harvested without the help of machinery. The grain is at the top of the long stalks.

Many kinds of crops. Wheat is the leading crop in the Yellow Plain, but many other crops also are grown in this area. The farmer in Figure 127 has a small wheat field. He may also have a patch of millet, corn, kaoliang, soybeans, cotton, sweet potatoes, or something else. The vegetables in his garden may include cabbages, onions, melons, beans, radishes, and cucumbers. Many vegetable gardens are irrigated from wells.

The farmers of the Yellow Plain have good reasons for growing many different things. Since the rainfall is uncertain, a farmer may feel that it is too dangerous to plant all his land to one crop. If that crop fails, everything is gone. If several crops are planted, one or two of them may fail but there may be some harvest of something. Also, a variety of crops means a wider choice of food in a land where people grow most of what they eat.

Growing more than one kind of crop helps to spread the work over a longer period of time. In Canada, a few men can harvest many acres of grain in a few days with the help of modern machines. In China, the work cannot be done so quickly, for there is little machinery. If all the crops grown by a farmer ripened at once, much of the harvest would be lost before he could gather it.

To the market town. As in South China, village farmers in the Yellow Plain occasionally go to a near-by market town. There they sell a few surplus products, and perhaps buy cloth or simple farm tools. Most of these

farmers never get farther from home than the nearest market town.

A winding dirt road connects a village and a near-by market town. Along such roads, goods move by wheelbarrow, by two-wheeled cart, or on the backs of either men or donkeys. All winter, and on many days in summer, clouds of yellow dust rise high above the road as this traffic moves slowly along. When the summer rains come, the roads are deep in mud.

Extra work. As in most of the rest of China, farmers in the Yellow Plain need extra work in order to live. Growing many kinds of crops does not mean that the people are well-to-do. Actually, they grow so little of each crop that, on the whole, they are perhaps as poor as any farmers in the country. Here and there, some farm people work in little shops making farm tools, simple furniture, leather goods, and the like. A few find employment in the cities. Many cannot get the work they need.

Shantung Peninsula. Many thousands of years ago, the Shantung Peninsula was a mountainous island off the coast of Asia. A map of that very early time would show a great bay where the Yellow Plain is today. The inland cities of Peking and Kaifeng (Fig. 117) are built on land which once was the shore of the bay. The shore line moved east, year by year, as the Hwang Ho and other streams brought tremendous loads of sediment to the sea. Now, the delta extends halfway around what once was an island. So it is Shantung Peninsula, instead of Shantung Island.

Crops and methods of farming in the Shantung Peninsula are much like those on the Yellow Plain. Since the monsoon rains come from the sea, there is a little more moisture in Shantung. Most farming, however, is dry-land farming in the valley bottoms.

Although the mountain slopes were once covered with fine forests, they are now barren. The trees have been carelessly cut away, most of them for fuel. Some coal is mined in

the peninsula, but this makes little difference to most of the people, who are farmers.

Land of the Yellow Earth. The third part of North China extends west from the Yellow Plain, between the Tsingling Mountains and the Great Wall (Fig. 117). This is a land of hills, mountains, and narrow valleys—a land both poor and rich in resources.

The Chinese call much of this area Hwang Tu, or Yellow Earth. Nearly all the land is covered with a blanket of fine yellow soil which the winds brought as dust from dry lands to the northwest. One writer says the dust was sprinkled over the countryside as if by a giant flour sifter. In places, the blanket of yellow earth is more than 100 feet thick. The Hwang Ho got its name from Hwang Tu. Each year thousands and thousands of tons of this yellow earth are carried away downstream.

The yellow earth is easily blown away, washed away, or cut away. The dust in a trail, for example, quickly blows away. Then, after a rain, water may gather in this slightly lower place and wash more earth away. This goes on, time after time, until a road may become a deep, narrow gulch.

Many farmers in the land of Yellow Earth are cave dwellers. They have cut their homes out of steep walls of earth, perhaps along sunken roads. Such homes may have several stories, and holes cut for windows. A writer tells of chimneys cut from the caves to the fields above. In such places, one may see smoke rising in the midst of a field of grain.

Dry-land farming is the rule in most of the land of the Yellow Earth, as it is in the rest of North China. There are the same familiar crops, too—millet, kaoliang, wheat, and others.

In most of the Yellow Earth, irrigation is impossible. Nearly all the rivers have cut deep valleys, leaving most of the land high above the water. Here and there men have found ways of irrigating narrow strips of land in the valley bottoms. But most of the fields are far out of reach of water from the streams.

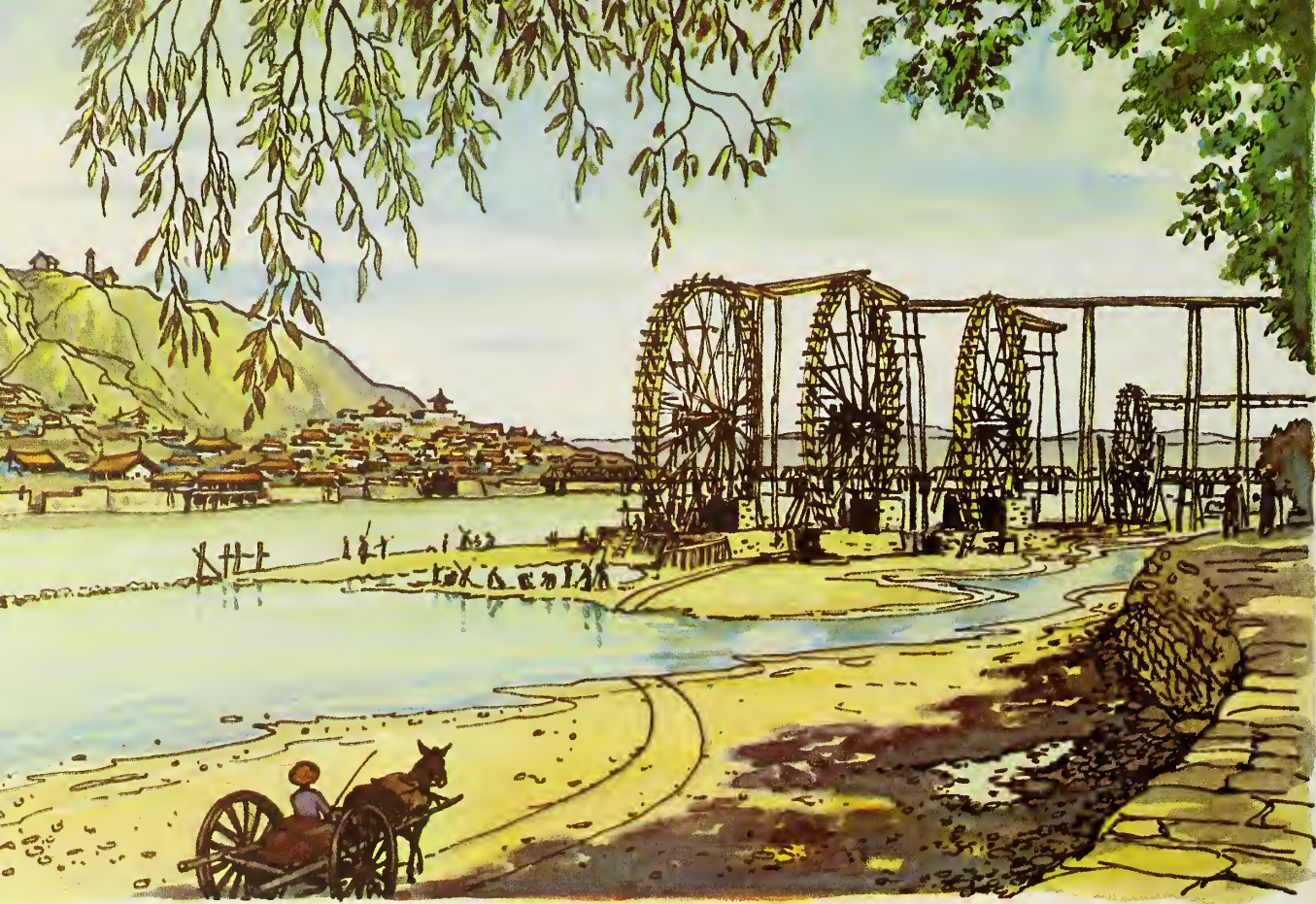


Figure 129. Big water wheels on a big river

The picture shows how water is raised from the Hwang Ho at Lanchow (Fig. 117). The big water wheels dip into the river just enough for the moving stream to turn them. As they turn, hollow tubes, attached to the rims of the wheels, fill with water. The water is raised to the top of the wheel, where it spills into a long trough that carries it to fields near-by in the valley. It would be impossible to build wheels that would carry water high enough to irrigate the upper slopes.

Much coal, little mining. China's greatest store of mineral wealth is coal. Most of it is in the land of the Yellow Earth. China's coal resources are greater than those of any other country in Asia. In fact, very few countries in the world have greater coal resources than China.

There is some mining where railroads reach west from the Yellow Plain (Fig. 117). On the whole, however, little use is now made

of these resources in coal. At some future time, this area may be one of the richest parts of China because of the use made of its buried wealth.

North China, land of famine. All of North China is spoken of as a land of famine. During the centuries, millions of people have starved to death there. Two of the chief causes of famine are drought and flood.

The rainfall map on page 128 shows that the average rainfall in most of North China is between 20 and 40 inches a year (p. 151). This does not necessarily mean drought. Many crops do well on that amount of rain. The great problem is that the rainfall is irregular, that the people cannot count on even 20 inches *every* year. One year the total may be 30 inches. The next year it may be only 10 inches. Then crops wither, or the seeds may not even sprout. Even in good years, there usually is barely enough food to last until

the next harvest. If, then, that harvest fails, there is famine.

Poor transportation may help to cause a famine. Thousands of people once starved in the land of the Yellow Earth when food was plentiful at the coast. Trains could have brought the food in a few hours to those who needed it so badly. But there were no railroads, or even highways. Food could not be carried so far on the backs of men or animals. They would eat as much as they could carry before they reached the hungry people.

China's sorrow. In the Yellow Plain, floods as well as drought have brought famine after famine. Sometimes the flood waters have spread out from the Hwai River (Fig. 117). At other times, the damage has been done by the Hwang Ho. People have suffered from the Hwang Ho so often that this river is widely known as "China's sorrow."

Many things cause floods on the Hwang Ho. Years ago nearly all the trees were cut from the hills and mountains along the upper Hwang Ho and its branches. Now, when sudden rains fall, there is little forest cover to hold back water. It races toward the sea, carrying along a great load of fertile yellow soil.

As the river reaches the delta, it flows more slowly and drops much of its load in the channel. Little by little the river bed is built up. If left to itself, the Hwang Ho would wander this way and that over the delta. For many years the Chinese have tried to keep it in place by building dikes along the banks. As the river bed rises, the dikes must be built higher. Finally, the river flows between these dikes on a narrow ridge above the plain.

At last a day comes when the dikes are not kept up or when unusually high flood waters roar down from the barren hills. The river breaks over or through a dike, and seeks a new path to the sea. Whole villages may be washed away. The people who escape the flood can expect to find their crops ruined. It may be months before the fields are dry

enough so that seeds can be planted again. In the meantime, the people face famine.

It is difficult or impossible, of course, for men to guide the river so that it will return to its old bed. New dikes may be built, and before long the river may flow on a new ridge above the plain.

Because men have not learned how to control the Hwang Ho, the Yellow Plain is an area of dry-land farming and not an irrigated land. It would require much skill and the work of many people to control the river. A farmer cannot get water for his crops simply by cutting a channel through a dike. The dikes are made of dirt and are high above the plain. If even a small channel were cut, the whole river might follow, rolling down from its ridge and on and on over the fields. If some day the river is controlled, it will be a great life-giver instead of a life-destroyer. In the meantime, floods come, and famine follows flood.

Helps in Learning

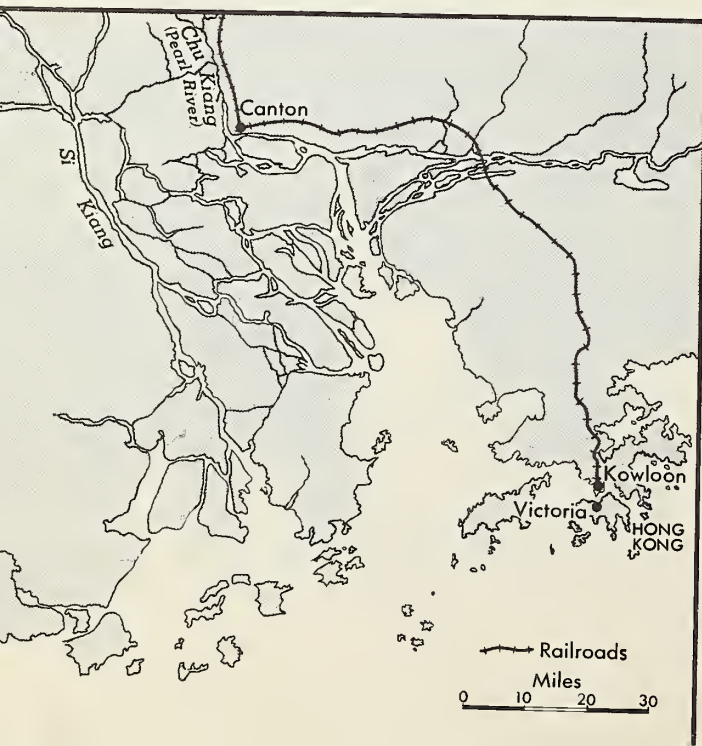
1. Using the map in Figure 117, show what area is South China, what area is North China.
2. Describe three ways in which farming in North China differs from farming in South China. Give at least one reason for each difference.
3. What are the advantages of growing several kinds of crops in North China?
4. In general, will a certain area of farm land in North China support more people, or fewer people, than an area of the same size in South China? Why?
5. Name two ways in which all three parts of North China are much alike.
6. Tell how poor transportation may help to cause a famine.
7. Explain how floods in the Yellow Plain may cause famine.
8. Why is the Hwang Ho little used for irrigation, either in the land of Yellow Earth or in the Yellow Plain?
9. What might be done in the land of Yellow Earth to help the farmers in the Yellow Plain?



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Figure 130. Along the Grand Canal, at Peking

Figure 131. Canton, and its surroundings



Five big cities. About three-fourths of the Chinese people make a living directly from the land. Yet, as Figure 117 shows, many Chinese live in big cities. Several of them have populations of more than a million. Five very large cities in China Proper are Peking, Tientsin, Canton, Hankow, and Shanghai. Stories of these five cities tell much about the industry and trade of all China.

Peking, the old capital. North China has two big cities, Peking and Tientsin. For a time, Peking was called Peiping, but its original name has recently been restored. Together these cities have more than seven million people. Both are in the Yellow Plain, only about 60 miles apart (Fig. 117).

Peking is the only city of great size in China which is not a river port or seaport. It was founded more than a thousand years ago, when control of a near-by pass through the mountains was of great importance.

Peking is perhaps best known as "the old capital." The city grew big and became world famous as the capital of the Chinese Empire. Now, as we know, China is a republic. For a time Nanking was the capital, but in 1949 the People's Government again made Peking the capital.

Peking is a city of trade and commerce as well as a centre of government. Helped by railroads and a few automobile roads, Peking serves as a business centre for a part of the Yellow Plain. The control of near-by passes is still important.

The picture in Figure 130 shows a small part of one of the old walls in Peking. The building with the graceful, curved roofs is a good example of the many fine buildings in the city. Two-wheeled carts, like those in the picture, are seen throughout North China.

The water in the foreground of the picture is part of the famous Grand Canal, built many years ago, from Hangchow, on the coast south of Shanghai, to Peking (Fig. 117). For years

this canal was very important to the government in Peking. It carried rice, which was collected as a tax, from the irrigated Yangtze Valley to the capital. Much of the canal still is used, but part of it is filled with sediment. In winter, some parts of it are frozen or dry.

Tientsin, city of commerce. Tientsin is the leading city of trade in North China. It is a river city, a railroad centre, and a seaport (Fig. 117). Tientsin is about 40 miles from the sea, on a small river. Time after time this river must be dredged. In winter it freezes over. Traffic then is kept moving only by the help of icebreakers. Above Tientsin, the river is not navigable for ocean ships.

Railroads connect Tientsin with almost all parts of the Yellow Plain. These railroads carry products to the seaport city, and carry goods back to smaller cities and market towns. The level Yellow Plain has the best network of railroads in China Proper.

As we should expect, Tientsin leads in ex-

porting products of North China, such as cotton, wool, hides, and skins. Some wool and hides and skins come from the Yellow Plain; some come from the dry pasture lands to the west. Cotton mills in the city have grown much in recent years. They use some of the cotton produced in the plain.

Peking has kept its old walls and is proud of them. Tientsin, a city of commerce, tore down its walls as it spread out into what once were farmers' fields.

Canton, in the far south. The leading city in the far south of China is Canton, on the delta of the Si Kiang (Figs. 117 and 131). As Figure 131 shows, Canton is on the banks of the Chu Kiang, or Pearl River. This river is one of several streams which helped to build the delta.

In the picture below, we are looking east along the Pearl River toward the ocean. The bridge in the distance connects Canton, on the left, with a large island in the delta, on the

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Figure 132. The river front at Canton

U.S. Signal Corps



right. The street along the river is one of Canton's finest and newest. Many of the other streets are dark, narrow, and crowded.

The dozens of river boats in the picture are only a few of thousands in the area. Many are "boat-homes." It is said that in Canton about 200,000 people live on such boats. Many people are born, live, and die on their boats. They never have a home on land.

The Cantonese, as the Chinese people in this region are called, are in general not as tall as people elsewhere in China. They pronounce many words a little differently. Most of the Chinese who moved to foreign lands in the past were Cantonese. Millions of them have gone to the coasts and islands of southeastern Asia—to Singapore, for example (p. 67). Some have come to Canada. Most Chinese here are Cantonese.

Canton is one of the very old cities in China. The first European ships which came to China (p. 9) came to Canton. For a long time afterward, it was China's leading city in trade with the outside world. Now, several cities have far more trade than Canton—for example, Shanghai and British-owned Hong Kong (p. 68). But the old city of Canton is still a big and important city in China's far south.

The location of Canton in the delta helps to explain why it is no longer a leading ocean port. The ships of many years ago could sail up the Pearl River to Canton. Modern steamers cannot. The river is much too shallow for them. Most ocean steamers now anchor in the deep natural harbor at Hong Kong, and most of Canton's foreign trade is carried on by way of that city.

Canton depends much more on inland trade than on foreign trade. A network of thousands of canals puts it within reach of about nine million people who live in the delta. The rivers carry trade still farther inland. The Si is navigable by river steamer for about 200 miles upstream, and much farther by smaller boats. The city of Canton is

also at the end of a railroad which connects China's far south and the Yangtze Valley (Fig. 117).

Thousands of workshops and factories in Canton make goods of many kinds, not only for millions in the crowded delta, but also for other millions in the valleys to the north and west. Many products from those areas find a market in Canton—silk, tea, rice, fine woods, and other products. While Hong Kong looks to the seas, Canton looks to the rich land of China's far south. It has grown to be one of China's largest cities.

Hankow, and the middle Yangtze. Two of China's five big cities are in the Yangtze Valley. The largest, of course, is Shanghai, the gateway city in the delta (p. 144). The other is Hankow, on the middle Yangtze (Fig. 117). Hankow gets its name from the Han Kiang, which there joins the Yangtze. Sometimes Hankow and two near-by cities are spoken of as one great city.

Hankow is a crossroads city. It is where the Yangtze meets a railroad which connects North China and the far south (Fig. 117). This railroad reaches to Canton. At Hankow, ocean steamers may be seen side by side with river boats, some from the Han. A few years ago blast furnaces near Hankow used iron ore mined near the Yangtze. Most of Hankow's business, however, is crossroads trade. It depends chiefly on the collection, exchange, and distribution of many kinds of goods.

The two large lakes just south of the Yangtze, one above and one below Hankow (Fig. 117), are great natural reservoirs. During the rainy summer, the flood waters of the Yangtze fill these reservoirs until each is 50 or more miles across. In winter, both lakes are almost dry. This storage of extra water helps to explain why there are fewer destructive floods along the Yangtze than along the Hwang Ho.

Other cities along the Yangtze. Figure 117 shows there are about as many large cities in

the Yangtze Valley as there are in all the rest of China Proper. Nanking and Chungking are well-known cities in this river valley.

Nanking (Fig. 117) was for a time the capital of China. The central government moved there from Peking in 1928. Nanking was chosen as a new capital because more than 500 years earlier it had been China's capital. The city has had little importance since the People's Government made Peking the capital.

Chungking is on the upper Yangtze (Fig. 117). This city became well known during World War II because it was the temporary home of the Chinese government. The government fled to Chungking when Japanese armies overran cities near the coast.

Chungking is the business centre of the densely peopled valleys of the upper Yangtze (Fig. 119). There as along the lower Yangtze, rivers are the main highways. Small steamers

from the middle or lower Yangtze can reach Chungking, but only with difficulty. West of Ichang, Figure 117, the river races through a deep, narrow gorge. There, small boats are pulled upstream by long lines of men who almost crawl along the bank, tugging at ropes tied to the boats.

Foreign trade, cities, and farm villages. The foreign trade of China has changed greatly since the days when the Chinese believed they needed nothing from the outside world (p. 140). In time, they began to buy cloth and other manufactured goods. Before World War II, manufactured goods still led the list of things which China imported, although China had many factories. One of them is shown below. Imports of iron and steel, machinery, chemicals, paper, and cloth all were important. Certain kinds of raw cotton were imported, too, as well as much food, particularly sugar, rice, fish, and flour.

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Figure 133. A new factory on the banks of an old canal



As we should expect, most of China's exports before World War II were raw materials. They included soybeans, wool, hides and skins, coal, various ores and metals, and raw silk. Eggs also were an important export. Millions of them were produced in the Yangtze farm villages, and sold abroad. These exports were quite different from Chinese exports in the days when the first European traders came to Canton. Then, few things other than tea and silk were exported.

Before the war the manufacture of cotton cloth had become so important in China that it, too, was an important export. Most of the exported cloth was sold to countries in south-eastern Asia. In those countries there are many millions of people, and all of them needed cotton clothing.

The leading city in China for the manufacture of cloth is Shanghai. Figure 133 shows cotton being unloaded at a textile mill in the city. This cotton was grown in the near-by delta. It was brought by boat directly to the factory. The tide was low when the picture was taken. The boats are resting on mud in the bottom of the canal. In a few hours, the canal will be nearly full of water again.

In the years ahead, China's exports of manufactured goods may increase. Labor is plentiful, and cheap. More and larger factories may be built in such cities as Shanghai, Tientsin, and Canton. But now, as in the past, a very important part of China's manufacturing is done in little shops. Many of these shops are in small cities, in market towns, or in farm villages. So the export-import trade of China is of real concern to all the people, even to people who live in such places as Kaihsienkung.

Helps in Learning

1. Name five very large cities in China. Give one important reason for the growth of each.
2. What does weather have to do with the use of the Grand Canal? With the use of the harbor at Tientsin?

3. Items important in Chinese trade are rice, cotton, tea, wool, and coal. Which would you expect to find important in the trade of Peking? Of Tientsin? Of Shanghai? Of Canton?

4. Give several reasons why Canton depends more on inland trade than on foreign trade.

5. Read again about Hong Kong in "Other British Lands" (pp. 68-69). In what way, or ways, is Hong Kong important to Britain? To China?

6. Why should we expect most of China's exports to be raw materials?

7. What are some of the things that China imported from other countries before World War II? Why did China need these things?

Manchuria

An outlying region. Manchuria is one of the outlying regions of Greater China (p. 141). It is second in importance only to China Proper.

Manchuria is an area in which Russia, Japan, and China have long been rivals. At times, before World War II, both Russia and Japan had almost the rights of government along railroad lines which they owned in Manchuria. Japan invaded Manchuria in 1931, and held it until the end of World War II, in 1945. Now, following World War II the Japanese government has no rights there. But Russia has insisted on special rights in the region (p. 106).

Filling up an empty land. As late as 50 years ago, Manchuria was an almost empty land. Nomads herded their flocks on the wide, almost level, central plain (Fig. 117). Today, more than 43 million people live in Manchuria. Many of them live in farm villages like the one shown in the picture on the next page.

Manchuria remained thinly settled, during several centuries, while some other parts of China became more and more crowded. This was largely because of government action. In 1644, the Manchus, a people from Manchuria, took over the government of China. These Manchus and their descendants ruled



Figure 134. Pioneer farming in a new land

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China until 1911. They also ruled Manchuria. While they lived in Peking they wanted to keep the good land back in Manchuria for their own people. So they tried to keep others out of Manchuria. Later, settlement in Manchuria was encouraged, first by the Manchus and then by the Republic of China. One reason for encouraging settlement was the rivalry between China and Russia in this region.

To attract settlers, posters were circulated for a time, telling of wonderful opportunities in Manchuria. The word was passed from person to person. In Manchuria, so people said, there was plenty of room, and good land was almost free. Some men went there as summer laborers, returning after the autumn harvest. Entire families also went, and many of them stayed. In the nineteen twenties, the movement of people was at its height. As many as a million persons made the journey to Manchuria in a single year.

Some people went to Manchuria from Japan or Korea. But nearly all the settlers came from North China, driven by poverty or hunger, by fear of floods or famines. In the new land they hoped to make a better living. Thousands crowded into little steamers which carried them across the Yellow Sea, perhaps from Tientsin to Dairen (Fig. 117). Others moved by train, from Peking.

Many were too poor to go either by boat or train. They walked all the way. Travellers tell of meeting them. "Family after family trudging along with all their worldly possessions loaded high on a creaking wheelbarrow. . . . The head of the family toils between the shafts, while his wife hobbles along on foot. To help along the wheelbarrow, some of the children tug at ropes in front. . . . Many have not even a wheelbarrow and carry their scanty belongings in a little bundle. . . ."

Often there were new hardships when the people arrived in the new land. Fine prom-

ises sometimes turned out to be little more than words. But millions of Chinese found in Manchuria a somewhat better life than they had ever known before.

Today, the pioneer days are almost over. Manchuria has become a fairly well settled land, although it is by no means as densely peopled as China Proper (Fig. 119). Only a small amount of empty land is left, much of it in the cold north or dry west.

Farming in Manchuria. Most of the pioneers settled in the Manchurian plain. There they grew the same kinds of crops they had known in North China. Now, about half the crop land in Manchuria is planted to kaoliang and soybeans. Next in importance are millet and wheat. Other crops are corn, cotton, barley, and, in a few places, even rice.

The picture on page 161 suggests a new kind of farming in Manchuria. Two men are at work in a field, using a cultivator pulled by a horse. In general, farms in Manchuria are larger than those in China Proper. Many farmers have horses and mules as work animals. Less work is done by hand.

Helped by machinery and work animals, the farmers grow more than they can eat. Each year there is a huge surplus to sell. Most of the crops of kaoliang, wheat, and millet are used for food within Manchuria. In normal times, millions of tons of soybeans are shipped abroad each year. This is the great cash crop of Manchuria.

Soybeans have many uses today. The Chinese prepare them for food, in many different ways. Soybean oil is used in making soap, paint, and various other products. The "bean cake," left over after oil is pressed from soybeans, is widely sold as fertilizer.

Railroad, highway, or river. Many miles of new railroads were built in Manchuria to take care of surplus farm products. Manchuria now has more miles of railroad than there are in all of China Proper. Dairen (Fig. 117), the leading port of Manchuria, uses railroads almost entirely in its trade with the interior.

Most of the roads in Manchuria are dirt roads. During the summer they are either dusty or deep in mud. In winter, they are frozen hard.

River transportation is poor. Steamers sail down the Sungari River, from Harbin to the Amur River (Fig. 117). But important markets for soybeans, the chief export, do not lie in that direction. Besides, the Sungari and the other rivers in Manchuria are frozen for as many as five months in the year. At Mukden, winters are as cold as in Quebec City.

A few streams have helped in the development of lumbering in Manchuria. The Manchurian plain is almost boxed in with mountains (Fig. 117). China's greatest forests are on the slopes of the mountains to the east and north of the plain. In summer, great rafts of logs are floated downstream, particularly on the branches of the Sungari.

Coal and iron. Underneath the Manchurian plain, men have found coal and iron. One great open-pit coal mine is near Mukden. At Anshan (Fig. 117), before World War II, the Japanese developed an important steel industry. The iron ore was not of good quality, and there was no supply of coking coal near-by. But in their home islands the Japanese were still poorer in iron. So they developed this industry in Manchuria in spite of high cost and many difficulties.

Cities of Manchuria. Mukden, Dairen, and Harbin are the three leading cities of Manchuria. Each is a comparatively new city. Each is in the midst of farm settlements in the plain. Each is a railroad junction, where products come from farm or mine. At Harbin the Sungari River is crossed by a railroad leading to Vladivostok.

Manchuria in the future. The prosperity of Manchuria depends only in part on the resources described above. It depends also on who rules in the region. Only time can tell what changes will come to Manchuria now that it is under the control of the Chinese Communists.



Figure 135. The eastern gateway of Inner Mongolia

© James Sawders

Inner Mongolia

An “in-between land.” Inner Mongolia, Figure 119, is a region of hills and low mountains. Most of the region is north of the Great Wall (Fig. 117). Beyond the wall to the south is China Proper. To the north is Mongolia, in part a desert land. Inner Mongolia is the “in-between land,” a land not entirely desert, yet too dry for much farming.

As we should expect, few people live in this region (Fig. 119). However, the number varies considerably from time to time. When rains are better than usual, Chinese farmers push out into the grasslands and plant spring wheat, millet, and kaoliang. But years come when the rainfall is very light. Then the farmer must retreat, and the nomad moves in. Horses, sheep, and cattle graze in abandoned fields. Tents are set up beside ruined farm homes.

Kalgan. The picture above shows part of Kalgan, a city in Inner Mongolia (Fig. 117). Kalgan lives by its trade, which comes from near and far. The bundles of freight in the picture may move on by train, or truck, or camel caravan. A railroad, built through a mountain pass, connects Kalgan with Peking, about 100 miles away on the Yellow Plain.

At Kalgan, caravans of loaded camels have been coming and going for many years. They bring wool, hides, and skins, chiefly from Mongolia (Fig. 117). In return, they carry away such things as tea, cloth, and sugar. For a long time, caravans have carried freight to or from Ulan Bator, capital of Mongolia (Fig. 117). Now trucks carry some of it by road. A highway leads from Kalgan to Ulan Bator, which is connected with the Trans-Siberian Railroad in Russia. The trucks take about three days for the Kalgan-Ulan Bator trip. Camels require at least a month.

Deserts, mountains, and oases. Sinkiang is another of the outlying parts of Greater China (p. 141). This is a desert land, drier than most of Inner Mongolia (Fig. 107). Much of Sinkiang is so barren that even nomads with their flocks cannot make a living there.

The only important settlements in Sinkiang are in oases. All are located where the desert meets the mountains. All are watered by rushing mountain streams, fed largely by glaciers and melting snows. If all of Sinkiang's oases, large and small, were marked on a map, they would form a dotted line along the foot of the Tien Shan and along three sides of the Tarim Basin (Fig. 5). As the map shows, the Tien Shan is a high mountain range extending into Sinkiang from the west.

Many kinds of fruits, vegetables, and field crops are grown in the oases of Sinkiang. Shepherds herd flocks on the mountain slopes or in the edge of the desert.

Stepping-stones. For thousands of years the oases of Sinkiang have been most important as stepping-stones across central Asia. Many caravans took that route when, long ago, they carried silk to Europe. This route is often called the old "silk road" (p. 120).

Today, a fairly good dirt road makes it possible to travel by automobile from Lanchow, in China Proper, to the oasis city of Urumchi, and on into the Soviet Union (Fig. 5). During World War II, supplies moved from Russia to China over this highway.

In normal times, much of the trade of Sinkiang is with Russia, rather than with China Proper. Figure 5 suggests two reasons why. The Russian railroad east of Lake Balkhash is much nearer the settlements of Sinkiang than is any Chinese railroad. Also the lowland north of the Tien Shan makes possible an easy crossing of the border. As we should expect, this has led to strong Russian influence in Sinkiang, and, from time to time, to a weakening of Chinese power.

"The roof of the world." Tibet is the name given to a vast highland area in central Asia (Fig. 5). Most of this highland is a cold, dry, wind-swept plateau, more than 12,000 feet above the level of the sea. From this plateau, mountain walls rise thousands of feet higher into the sky. It is no wonder that Tibet is often called "the roof of the world."

The Himalaya Mountains (Fig. 5) are a part of the highland of Tibet. These mountains extend across the border into India, Nepal, and Bhutan (Fig. 5). Nepal and Bhutan are independent countries, closely tied to parts of India. Mt. Everest, the highest mountain peak in the world (29,141 feet above sea level) is only one of many very high peaks in Nepal.

A living in Tibet. In much of Tibet there is no way of making a living. The land is too poor, too cold, too steep, or too dry. In some places there is a little farming, and men find grass enough to support herds of yaks, goats, or sheep. Yaks look somewhat like shaggy oxen. They are the common beasts of burden in Tibet. They can stand the bitter cold of the plateau better than can most work animals. A yak can carry a heavy load, and seldom stumbles even where the trail is rough.

Most of the inhabitants of Tibet live in the eastern and southern parts of the plateau. There, some of the valleys are low enough and warm enough to permit a little farming. The chief crop is barley. Roasted barley, butter, cheese, and tea are common foods. The tea is brought by caravan from warmer lands.

Lhasa. The largest city in Tibet is Lhasa (Fig. 5), lying in a sheltered valley about 12,000 feet above sea level. The picture on the next page shows a very famous building in Lhasa. It is the home of a man called the Dalai Lama. It also is the headquarters of his religion. The Lama is both a religious and a political leader in this part of China. The Lama fled to India in 1959 in protest against



Figure 136. Far from the modern world

© Ewing Galloway

the decision of the Chinese to impose stricter control over his people.

For purposes of government, the Chinese divided the plateau of Tibet into Nearer Tibet and Farther Tibet. Nearer Tibet is made up of provinces in the eastern part of the plateau, next to China Proper, where Chinese influence has always been fairly strong. Farther Tibet is the western part of the plateau.

Lhasa is the capital of Farther Tibet. Until recently, British influence was strong there, partly because Lhasa faced India, not China Proper. Caravans required a month or two for the trip between Nanking and Lhasa. Mail used to be carried regularly from India to Lhasa in about a week.

Russia has watched closely what was happening in Tibet, for this "roof of the world" is close to Russian lands as well as to lands to the south. In 1950, Chinese Communists crossed into Tibet, and in 1951, Tibet came under the control of the People's Republic of China.

The Years Ahead

A forward look. How will the people of "changing China" be living in the years ahead? What will be the shape of the map of China 20 years from now? No one knows.

The Chinese Communists will try to make a permanent Communist state of China. This will mean control of the land by the state, as in Russia. It will also mean control of the people by the state.

Whether the Chinese people as a whole will support the Communist government and accept the changes or whether in time they will rebel and set up an elected government of their own, no one can tell. But whatever the government is, the Chinese people must face and solve many great problems. These include problems of agriculture, transportation, industry, education, health, and government. Only a united people can solve these problems effectively.

Many of the old things in Chinese civiliza-

tion are good. It is to be hoped that, as life in China changes with the years, the people will choose the things which are best, from the old and the new.

In agriculture. The problems in Chinese agriculture are many. There is too little good land for the people. Both drought and flood cause famine. Millions of farmers cannot afford even simple machinery. Taxes are high. Many farmers do not own their farms, and rents, too, are high. Many farmers are so deeply in debt that they can scarcely hope to get out, as long as they live.

Such problems, for millions and millions of people, cannot be solved easily or quickly. Not much can be done about the size of farms, but Chinese farmers can make better use of the land they now have. As men learn new ways of farming, better seeds are planted and new crops are brought in. A few farm machines, such as threshers, have been purchased by groups of farmers who share in using them.

Figure 137. In a world-famous canyon

© Natori, from *Black Star*



Men hope to grow trees again on the barren hillsides. Engineers and thousands of workmen have been busy along the banks of the Hwang Ho, in the Yellow Plain, trying to hold the stream within one main channel. If they are successful, thousands of acres of land, flooded part or all of the time, could be used for crops once more. This would be a great gain, in an over-crowded part of China.

Transportation. Better roads and more and better railroads would help to solve some of China's farm problems. In large areas, transportation is very poor. Poor transportation is expensive transportation. It costs much more to move goods in wheelbarrows, or in carts, or on men's backs, than to ship the same goods by rail. Good transportation usually means higher prices for farm products, and lower prices for goods which farmers need, whether cloth, or extra food, or farm tools.

Some day, railroads may take the place of two important caravan routes that connect China Proper with Russia (p. 120, p. 163). Such railroads not only would help agriculture and trade, but also would help to tie the outlying regions of Greater China more closely to the central government.

New factories. Industry, transportation, and agriculture depend much on one another. The use of more coal must wait for new railroads. If there were more factories in China, there would be greater markets for farm products—cotton, for example. The factory workers would buy food produced on the farms. In turn, good transportation and higher farm income would mean a greater market for factory-made goods.

China is finding that, in many cases, new factories bring new difficulties. As thousands of workers crowd into cities, there are new and very difficult problems of housing, health, and wages. The factories in these cities must compete with those in other countries. They also compete with village industries in their own country. If a factory in Shanghai hires

100 people and puts 50 people out of work in a near-by village, a serious problem is created for the people of that village.

Year by year the number of factory workers is increasing in China. Still the number is small considering China's huge population and great resources.

Yangtze project. One of China's dreams of the future is a project on the Yangtze Kiang. On that river the Chinese hope some day to build one of the biggest dams in the world.

Between Chungking and Ichang (Fig. 117), the Yangtze flows through a long deep canyon (p. 159). A small part of the canyon is shown in Figure 137. Great walls of rock rise far above the stream. The dam which might be built across this canyon would perhaps be 750 feet high—higher than any other dam in the world. The lake above the dam might be as much as two hundred miles long. The falling water would make enough electricity to light dozens of cities and turn the machines in thousands of factories. Water from heavy rains in summer would be stored for use during the dry winter, preventing serious floods and aiding irrigation.

Planning for the future. The Yangtze project suggests many problems about planning for China's future. Building such a dam requires thousands of laborers, much money, and many engineers. China has the laborers, but has not enough money or engineers. For the time being, the needed engineers may be brought from abroad. But if China is wise, it will plan to train more and more of its own engineers in the future.

For years the government of China has been weak, partly because of quarrels within the country. This, too, holds back progress. No one wants to build a railroad, dam, or factory without feeling sure that it will be protected. To all Chinese it is important that future plans include good government as well as improvements in agriculture, industry, transportation, and education.

What the People's Republic of China may

do, no one knows. It faces grave problems. Can it solve them?

Never like the past. It is not clear, then, what the China of the future will be like. There are great problems to meet. There are great resources to use. One thing is certain. China can never go back to a life like that of the past, when the country was protected by ocean, mountain, desert, and distance. The shrinking world (p. 20) and new inventions have made that impossible.

Helps in Learning

1. Tell in your own words the story of settlement in Manchuria. Why had the land long been empty? Where did most of the settlers come from?

2. How would you expect weather in Manchuria to differ from weather in North China?

3. A new kind of farming, a new marketing situation, and new railroad transportation developed together in Manchuria. Explain what each of these has to do with the others.

4. How is Inner Mongolia an "in-between land" in climate? In the ways in which people make a living?

5. Would "in-between land" be a good description of Sinkiang? Why, or why not?

6. Use the map in Figure 5 in explaining why much of the trade of Sinkiang is with Russia rather than with China Proper.

7. How do people make a living "on the roof of the world"? Why do they not grow rice?

8. What are three problems in Chinese agriculture? What things might help solve each problem? What may hold back the solutions?

9. "Industry, transportation, and agriculture depend much on one another." Explain how.

10. What changes might come to Sinkiang if railroads were built connecting it with the coast cities of China Proper?

11. Why is good government important both to farmers and factory workers in China?

12. China has been considered as one of the "big five" nations in the world. What was the chief reason for including it? What arguments might there be for not including it?



Figure 138. Life in the Mongolian desert

Courtesy American Museum of Natural History

MONGOLIA, KOREA, THAILAND

Three neighbors of China. China has many near neighbors (Fig. 5). Russia, India, Pakistan, Burma, Laos, and Viet-Nam have been described earlier in this book. On the mainland, there are three more—Mongolia, Korea, and Thailand. Mongolia and Korea border on China. Thailand also is a near neighbor, but it does not touch China.

Mongolia

Both old and new. Mongolia is said to be an old country because men have lived there for a long, long time. Three centuries before

the time of Columbus, a famous Mongol leader, named Genghis Khan, built an empire which reached all the way to Europe. Some people believe that, thousands of years earlier, Mongolia was one of the first places where man lived, anywhere on the earth.

Mongolia also is a new country. It was in 1946 that China recognized the independence of Mongolia (p. 140). For centuries it had been considered a part of China. In recent times, however, the authority of the Chinese government had become weaker and weaker. Finally, a complete break was made.

The full name of the new, independent

Mongolia is the "Mongolian Peoples' Republic." It is also frequently called Outer Mongolia, to set it apart from Inner Mongolia, which is still a part of Greater China (p. 141). Most of the people of Mongolia are Mongols. They are somewhat like the Chinese.

A land of little rain. Mongolia is one of the dry lands which helped so long to isolate China (p. 138). Part of the almost rainless Gobi Desert is within Mongolia (Fig. 107). In the steppe lands near this desert, there is a little more rain, and enough grass to support many herds of animals. Almost nowhere in Mongolia is there rain enough for farming without irrigation.

In the picture on the opposite page we are looking toward the Altai Mountains in western Mongolia (Fig. 117). Sheep are resting near a Mongol camp in the foreground. Cattle and horses graze in the distance. To the right is a shallow lake, fed by little streams from the mountains.

The place shown in the picture is a good place for herders to camp. There are both grass and water. Yet these Mongol leaders cannot stay long. The grass is short, and grows only in scattered bunches. Soon all of it will be eaten. Then the herders must pack up their tents and move on—and on again—always in search of new pastures.

The life of these herders is difficult, at its best. They live much to themselves. In times of famine or sickness they must care for themselves. Even the weather makes life hard. One traveller says the people are "scorched by an almost tropical heat in summer, chilled in winter to an icy cold." Winter temperatures in Mongolia often fall to 30° or 40° below zero. Most of Mongolia is as far north as southern Ontario.

Almost everywhere rainfall is uncertain. The lake in Figure 138 may not be there another year. Most of the rain falls in light summer showers, perhaps in widely scattered places. The herders must search for grass.

Because the scattered showers are so important, a common greeting among the herders is, "Has rain fallen in your neighborhood?"

In a Mongol camp. The livestock of the Mongols are horses, camels, cattle, goats, and sheep. Herders spend long hours on horseback, caring for the herds and flocks. Long lines of heavily laden camels move along the caravan trails. Cattle are used to pull big, heavy, two-wheeled carts. Sheep outnumber all other livestock put together. The nomadic Mongols depend largely on their stock for a living. The flocks supply milk, butter, cheese, meat, wool, and skins.

The Mongol tents, two of which are shown in Figure 138, are called yurts. Each yurt is made by stretching pieces of felt over a framework of poles. The dome-like shape of a yurt helps it to stand against the strong winds that often sweep across the land. The thick felt gives good protection against cold weather. A yurt can be set up or taken down in half an hour. It can be moved easily from place to place.

Figure 139 shows men at work making felt for a yurt. A layer of sheep's wool is soaked with water, and rolled around a pole. It is then dragged over the ground. In this way the wool is pressed together into felt.

The picture at the bottom of the next page was taken inside a yurt. The tent framework shows in the background. There are only a few furnishings, a chest, a few boxes, and a painting or two. Fires are built in the metal frame in the centre of the yurt. The common fuel in Mongolia is the dry manure of animals. The man is wearing a coat made partly of sheepskin. The children are drinking tea. Very likely, wool was given to a passing trader in exchange for tea.

City, town, and transportation. The total population of Mongolia is small, less than a million. Wandering tribes make up less than half of that number. Most of the other people live in oases and make a living from irrigation farming or from trade.

To the oasis villages, towns, or cities come caravans from the outside world, bringing tools, sugar, tea, flour, cloth, and the like. They carry away loads which include wool, hides and skins, and camel's hair.

The capital of Mongolia is Ulan Bator (Fig. 117), an oasis city of about 80,000 persons. It is the chief trading centre of the country. Important trade routes lead from Ulan Bator both to Russia and to China. One route leads to Kalgan, in Inner Mongolia.



Courtesy American Museum of Natural History

Figure 139. Making felt

Figure 140. Nomads at home

Courtesy American Museum of Natural History



Recently most of Mongolia's trade has been with Russia (p. 163). Ulan Bator is now linked with the Trans-Siberian Railroad in Russia, but there is no rail connection with China yet. For some time, too, the government of Mongolia has been more closely connected with Russia than with China.

Automobiles and trucks may be seen on the main trade routes in Mongolia. But most of the trade of the country moves in the old, old way, shown in Figure 141, on the backs of camels and donkeys.

The camels in the picture are called Bactrian camels. They differ somewhat from the camels of North Africa and Arabia. The Bactrian camel is smaller, and has two humps instead of one.

Settling down. The government of Mongolia has encouraged wandering tribes to settle down, rather than move about with their flocks. Some tribes have done so, but most of them would find it impossible. It takes a large area to support the herds which provide a living for a tribe. The area is so large that the herds could not be driven back and forth each day between a village and distant pastures. So the people continue to follow the herds in their search for grass. This way of life will not change greatly in years to come, for Mongolia will remain a land of little rain.

Korea

A crowded peninsula. Reaching south from eastern Manchuria is a wide peninsula occupied by Korea (Fig. 117). As a country, Korea is much smaller than Mongolia. Yet the population of Korea is about 30 million. This is about 45 times as many people as there are in Mongolia. This large population suggests, of course, that the resources of Korea are much greater than the resources of Mongolia.

About a fifth of the land in Korea is lowland. The rest of the country is mountainous



Figure 141. Caravan trade: slow and hard

Courtesy American Museum of Natural History

(Fig. 117). The mountain range along the eastern coast is like a great wall. On that side of Korea there are few harbors, few cities, few people. From this mountain wall the land slopes westward toward the Yellow Sea. Near that sea are most of Korea's lowlands, crowded with people. As in China, most of the people live in the lowlands.

Civilization began to develop in Korea somewhat later than in China. Many words in the Korean language came from Chinese. But today the Korean people are proud of their own language and their own customs.

Land of rivalry. For hundreds of years Korea has been a land of rivalry between three neighbors. To the west is China, to the north is Russia, to the east is Japan. These countries have often quarrelled over Korea.

Japanese rule. In 1910, Japan made Korea a part of the Japanese Empire, and named it "Chosen." Japan ruled Korea, or Chosen, until the end of World War II, in 1945.

The Japanese profited much from control of the Korean peninsula. Korea supplied large quantities of food and raw materials, particularly rice, cotton, fish, iron ore, coal, and gold. Korea's millions were an important

market for manufactured goods made in Japan. Korea also was an advance base for military conquest by Japan on the mainland of Asia.

The people of Korea gained less by Japanese rule than did Japan. It is true, for example, that the Japanese introduced better methods of farming and mining. But year after year more and more land passed from Korean ownership into Japanese hands. The Koreans remain among the poorest people of Asia.

Seoul. The picture on the next page shows the main street of Seoul, capital and largest city of Korea (Fig. 117). Another name for Seoul is Keijo. The picture suggests a modern city, with paved streets, fine buildings, automobile traffic, and streetcars. This part of the city *is* modern. But some of the rest of Seoul is neither modern nor attractive. In many parts of the city, streets are narrow and dark, and the homes are poor.

Seoul is an important centre of trade and manufacturing as well as of government. As Figure 117 shows, Seoul is at the very centre of Korea's railroad system. Bus lines reach far out into the countryside. Seoul is not a port. Nevertheless, much of Korea's foreign



Figure 142. A modern section of an old city

© Three Lions

trade passes through the city on its way to or from the sea, not far away.

Making textiles is more important than any other kind of manufacturing in Seoul. Labor is cheap, and Korea is a huge market for cloth. In the country as a whole, the chemical industry is in first place, and textiles are second. Most of the chemical plants depend on water power, so they are located near waterfalls in the mountains. The leading chemical product is fertilizer.

In Seoul and throughout the country, thousands of people work in household industries. Within their homes they make goods for sale, often competing with large factories. Hundreds of different things may be made in the households, including cloth, kitchen utensils, bricks and tiles, candy, bread, and pottery.

Many Japanese moved to Korea during the

Japanese occupation of the country. Very few of them were farmers. Nearly all lived in the cities, many in Seoul. Some were in government work. Others made a living from trade or industry.

Village in Korea. To most Koreans, Figure 142 would not look like home. The picture on page 174 would seem much more familiar, because most Koreans are farmers. Nearly all of them live in villages much like that one.

Figure 143 is a winter scene. There are no leaves on the trees. Nothing is growing in the gardens. Yet winter here in the lowlands of Korea is mild enough so that wheat and barley may be sown in the fields in the autumn and harvested in early summer. Snow falls now and then in winter, but usually it melts away within a day or two. In the Korean mountains winters are bitterly cold, and heavy snows

cover the ground for months. Summer or winter, most Koreans wear white clothing.

The houses in Figure 143 were made of materials which are not costly. The walls are of sun-dried brick. Most of the roofs are thatched. Only a few people can afford roofs made of tile. None of the houses has a stove. Instead, the floor of a house is heated by warm air from the kitchen fireplace. The house is built so that this warm air passes under the floor before escaping to the outside. Children frequently take off their shoes in order to warm their feet on the floor.

The main street of the village shown in the picture is lined with little shops. Several are general stores, selling cloth, farm tools, simple dishes, candy, and many other things. Next door to a general store there may be an inn, or the shop of a tailor, or a carpenter, or a blacksmith. On market day, the street is crowded with people, many from smaller villages near-by.

Farm crops. Irrigated rice is the leading farm crop in Korea, as it is in South China. Before World War II, as much as half of the harvested rice was shipped to Japan. In place of rice many Koreans ate barley or millet, which were cheaper foods.

The farmers in Korea grow not only rice, barley, and millet, but also cotton, wheat, soybeans, corn, and potatoes. Many vegetables are grown, too. Among them are turnips, cabbages, and radishes. Cotton is one of the newer crops in Korea. It was very important to the Japanese, for little cotton was grown anywhere else in their empire.

Most Korean farmers have a hard time making a living. Farming methods are much like those in China. The farms are small. The farmers have few tools, or work animals. Most farmers live on rented land, paying half or more of the crop to the landlord. Usually they rent for only one year at a time. So they try to get all they can from the soil during that year, even though it harms the land for use in later years.

In the forests. Most of the hills and mountains in Korea are covered with trees, large or small. The best forests are in the higher mountains of the far north. There large amounts of timber are cut each year. Near the valley settlements, large areas of forest have been cut away for firewood or charcoal. Since few trees were replanted, the rains have washed away much good soil.

"Fire-field farmers" increase the damage to forests. These farmers burn off patches of forest land, which in most cases they do not own. They may grow two or three crops in a clearing before rains wash the top soil away. Then they move on, burn more forest, and destroy more land. It is believed that about one acre out of every ten farmed in Korea is in fire-fields.

A troubled land. When World War II ended in 1945, American troops occupied the southern part of Korea. Russian troops occupied the northern part. The dividing line was the 38th parallel. Later, both Russia and the United States withdrew their troops. Since no agreement could be reached regarding a single government for Korea as a whole, two separate governments remained in the land. In effect, there was a country called South Korea and another called North Korea.

In the summer of 1950, North Korean armies attacked South Korea. The United Nations took action and sent armed forces to help the South Koreans. When it appeared that the North Koreans were defeated, Chinese armies entered the conflict on the side of North Korea. The fighting stopped in 1953, but Korea still was a divided land.

Regardless of how the matter of government finally is settled, Korea faces enormous problems in the years to come. First of all, the people must rebuild the villages, towns, and cities destroyed during the fighting. Highways, railroads, and bridges must also be repaired or rebuilt. All this will take years of work and huge sums of money.



Figure 143. Crowded homes in a crowded land

There is hope, of course, that with permanent peace, Korean industries may grow to be much greater than they ever have been in the past. Conditions in general are rather favorable. Korea, especially North Korea, has great resources in coal, iron ore, gold, graphite, and other minerals. There is abundant water power. In important foods, such as rice and fish, the country is more than self-supporting. And in this crowded peninsula, there is a huge labor supply.

Thailand

A southern neighbor of China. Thailand, sometimes called Siam, has been another of Asia's many areas of rivalry. Until recently, Burma was a British land. To the east are Laos and Viet-Nam. To the south is Malaya. Even today, Thailand does not entirely agree with its neighbors as to where the boundary lines should be drawn.

The shape of Thailand is unusual. From the

main part of the country, a long and narrow strip of land reaches far south into the Malay Peninsula, touching both the Bay of Bengal and the Gulf of Thailand (Figs. 5 and 117).

All of Thailand is a tropical land (Fig. 117). Frosts never come, except in very high mountains. It is a "monsoon land," too (p. 53). Winters are dry, summers are rainy. However, as Figure 107 shows, much of Thailand gets less rain than its neighbors. Mountains surround the central plain, along the Menam River, and hold back some of the rain-bearing winds.

River country. The Menam (Fig. 117) is the "main street" of Thailand. Most of the people live along this river. On the eastern bank of the lower Menam is Bangkok, capital and largest city. The river is the highway to market for most of the country's products.

The picture on the next page is a scene on the Menam. Great rafts of timber are moving down-river to sawmills at Bangkok. A young man camps on a raft, watching to see that the

logs keep moving. A raft of logs sometimes gets stuck on a sand bar or along the shore.

The logs in the picture came from forest-covered mountains in northern Thailand, where teak is the most valuable tree. A green teak log is so heavy that it will not float. So it is a common practice to cut away a strip of bark all around the trunk of a tree, in order to kill it while it is still standing. Perhaps a year or two later the tree will be cut down. Then the timber is dry enough to float readily. Teakwood is in great demand abroad, particularly in building ships.

Elephants are common work animals in the teak forests. They drag heavy teak logs to the streams. The logs are piled there to await the next flood. Sometimes there is a log jam in a mountain stream. Then an elephant, guided by a man on his back, may go down into the water, pushing logs this way and that with his powerful trunk, until the timber moves again.

Rice country. Although many thousands of fine teak logs are marketed each year, the leading product of Thailand is rice. Perhaps nine out of ten workers in the country have something to do with growing rice, or with transporting, milling, or marketing it. A religious ceremony is held each year to celebrate the beginning of the season of plowing for rice. As we should expect, rice is the chief food of the people. In the entire world, the leading exporters of rice are Burma, Thailand, Viet-Nam, Laos, and Cambodia.

Most of the rice is grown on the wide, almost flat plain of the Menam River (Fig. 117). An abundant supply of water is available from the main river or its branches. In general, farming methods are much like those used on rice lands in China (p. 145).

Frequently it is hard to control the water from the rivers, and the rice crops suffer from too much water. Each year during the summer monsoon, floods cover much of the plain.

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Figure 144. On the way to Bangkok





© Mrs. Branson de Cou, from Sawders

Figure 145. Marketing truck on a canal

Then, most people can travel only by boat. Most houses in the plain are built on posts.

As we know, the Menam River plain is the home of most of Thailand's people. By comparison, only a few live in the rest of the country. The plain is not nearly so thickly settled, however, as are parts of India and China. This is one reason why Thailand can be a great exporter of rice.

Bangkok. The picture on this page was taken in Bangkok, "centre of everything" in Thailand. It shows one of many canals in the city. Here is a "floating market." The buildings in the background are warehouses for products, including rice. Most of the rice merchants in Bangkok are Chinese.

Until about 75 years ago, there were no streets in Bangkok—only canals. Now a modern business district has developed, with paved streets, taxis, business offices, and hotels. The city also has beautiful temples, palaces, and Oriental gardens. But the canals remain, busy with traffic. They are a re-

minder that modern Bangkok still depends much on freight that moves by water.

Bangkok is the only modern port in Thailand. Nearly all foreign trade moves through the city, rice going out, and many kinds of goods coming in. Some large ocean steamers anchor at the mouth of the Menam, about twenty miles from Bangkok. The water is too shallow for them to sail up-river to the city.

Southern Thailand. Railroads reach out from Bangkok in three directions, to the east, the north, and the south (Fig. 117). The southern railroad connects Bangkok with Singapore, at the tip of the Malay Peninsula. This line was built at great cost through mountains, swamps, and tropical forests.

There are valuable tin mines in southern Thailand, as in Malaya (p. 68). In a few places, too, rubber plantations have taken the place of thick forests. Both tin and rubber have little importance, however, when compared with Thailand's greatest product—rice.

Helps in Learning

1. Read again about nomads in the Sahara (p. 98). Tell of ways in which their life resembles the life of nomads in Mongolia.
2. Explain why many tribes of nomads would find it unwise to settle down in one place.
3. Why can Korea support many more people than Mongolia?
4. Tell three ways in which Japan profited from her control of Korea.
5. What are "fire-field farmers"?
6. Korea has found that many problems come with independence. What are some of these problems?
7. With the help of the map on page 139, describe the location of each of the three capitals, Ulan Bator, Seoul, and Bangkok.
8. Thailand, Burma, and Indo-China are somewhat alike in several ways. Name at least three of these ways.
9. What are the advantages of an ocean front location for Korea? For Thailand?

JAPAN

Island country. Off the east coast of Asia there is an almost continuous line of islands, reaching from Sakhalin to Australia (Fig. 117). Three groups of these islands form independent countries, Japan, Indonesia, and the Republic of the Philippines. Most of the other islands in the western Pacific are parts of European empires.

Nearly all the people of Japan live on four islands, Hokkaido, Honshu, Shikoku, and Kyushu (Fig. 117). Honshu is the main island. It has most of the people, and the capital city, Tokyo.

Small and mountainous. The maps below show Japan and parts of eastern Canada and the United States that are in the same latitude. Both maps are drawn on the same scale. In comparison with Canada and the United States, Japan is a small country. It is only a little more than a quarter the size of the province of Quebec.

Japan is also a mountainous country, as

Figure 117 shows. It is said that on a clear day one is never out of sight of mountains, anywhere in Japan. The lowland areas are small, most of them scattered along the coasts. A few are between the mountain ranges. It is in the lowlands that most of the people live.

Weather—north and south. In Figures 146 and 147 we can compare the latitude of Japan with that of eastern Canada and the United States. Part of Hokkaido and part of Ontario are the same distance from the equator. The islands of Shikoku and Kyushu are about as far north of the equator as is the southern part of the United States. Tokyo, the capital and largest city in Japan, situated on Honshu Island, enjoys a mild climate.

Figure 148 is a scene in Hokkaido. There, winters are long and cold. Heavy snows blanket the mountains and valleys for months. Blizzards block highways and railroads. Summer weather usually is warm and pleasant.

Figure 149 shows a place near the southern

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Figure 146. Parts of two large countries

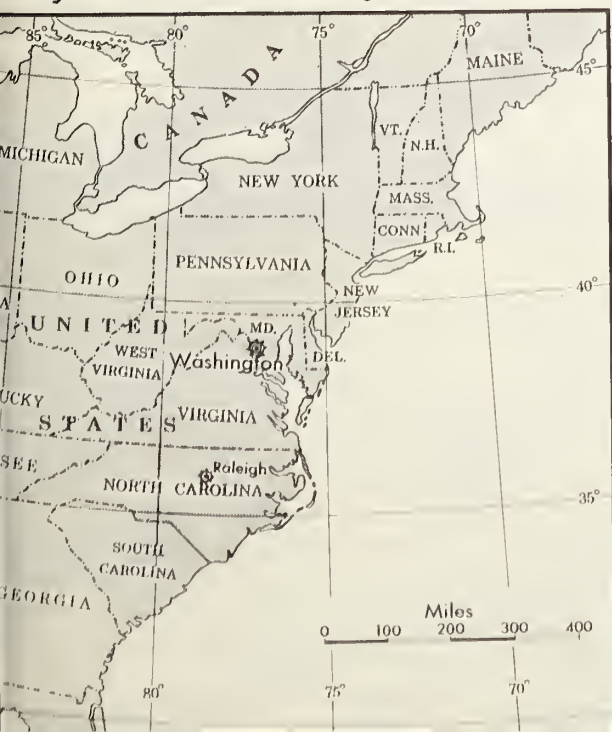
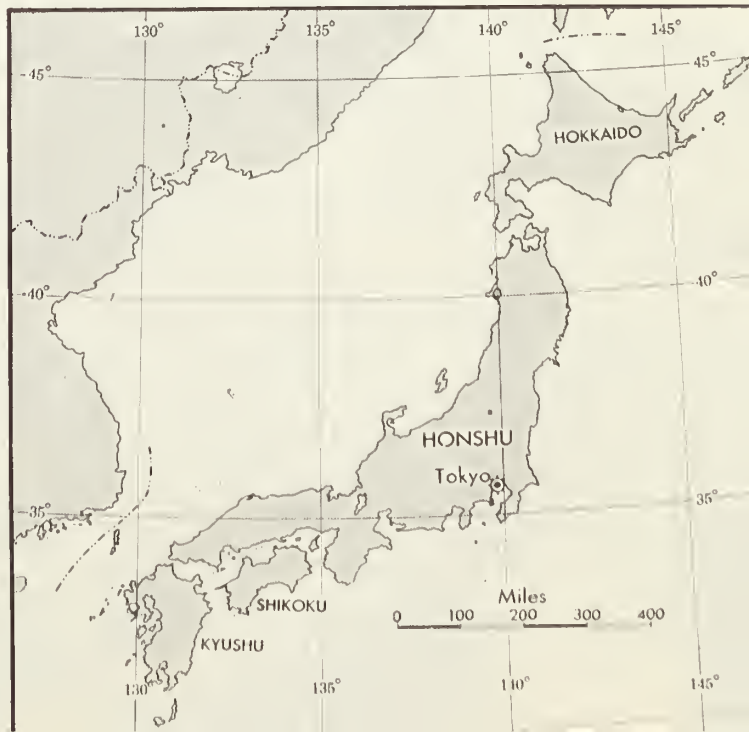


Figure 147. All of a small country



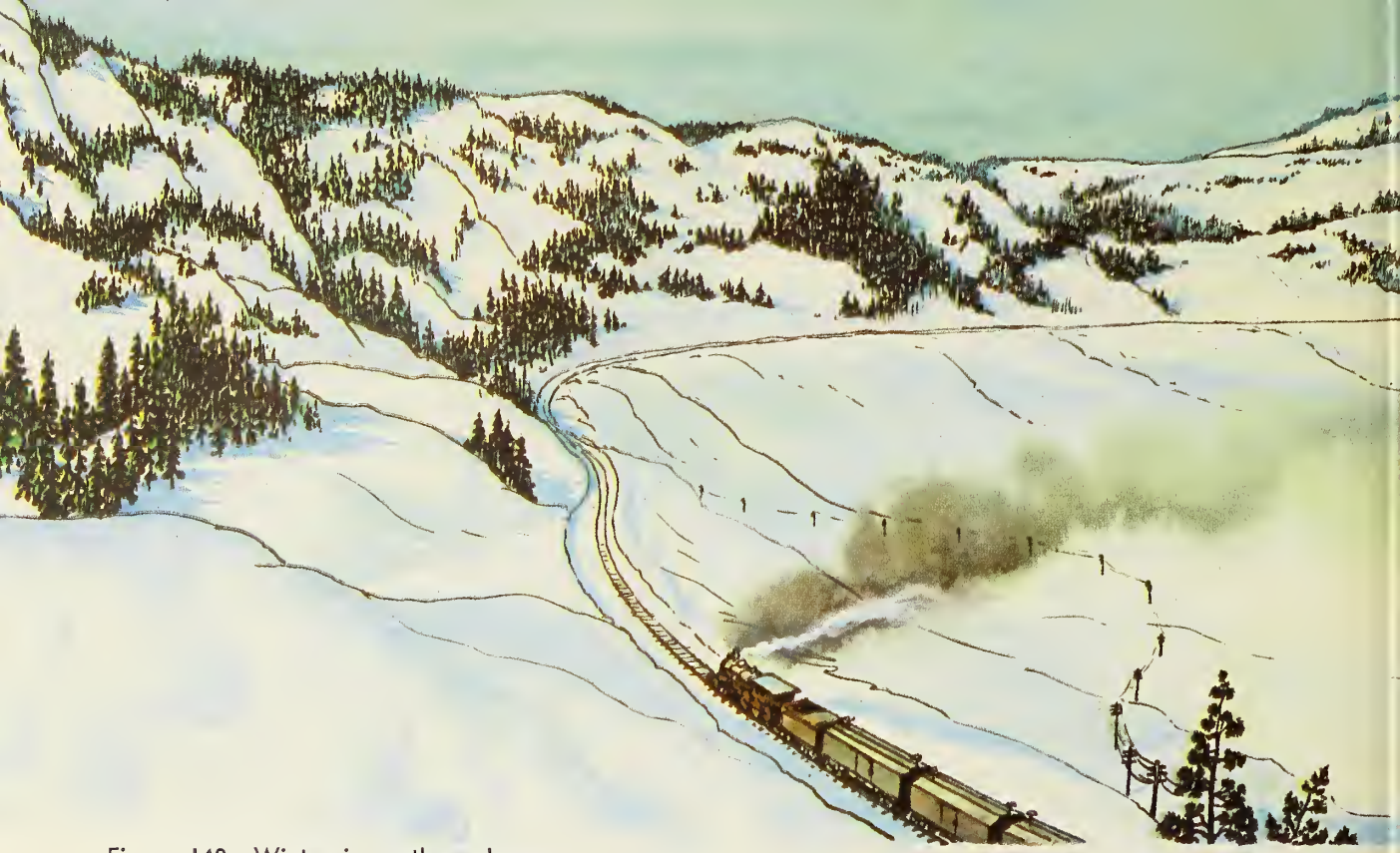


Figure 148. Winter in northern Japan

Figure 149. Summer in southern Japan



coast of Honshu on a summer day. The mountain in the background is a famous volcano, Mount Fujiyama (Fig. 117). The people in the foreground are gathering tea leaves. The tea shrub grows well in this part of Japan. Winters are mild and the growing season is long, although even here there are occasional frosts.

Days of isolation. Japan remained a land of primitive people for many years after civilization developed in China. When civilization finally developed in Japan, the Japanese, like the Koreans, borrowed much from the Chinese. They copied the alphabet of the Chinese, part of their religion, and some of their methods of farming.

During most of its history, Japan was shut off from the world even more than was China. Its island location helps to explain why. The old routes of land travel across Asia could not reach the islands of Japan. Once a group of Mongols, who lived in what is now Mongolia, tried to conquer Japan. An ocean storm scattered their fleet, and the invasion failed.

In the days of European expansion (pp. 7-11), Portuguese, Dutch, and English traders arrived in Japan. At first, the Japanese welcomed European traders. Later, however, Japan's leaders became afraid that the westerners wanted not only trade but also the land of Japan itself. So the Japanese decided to lock the foreigners out and lock themselves in. It became a crime, punishable by death, for any Japanese to go abroad, or even to build an ocean-going ship. For more than two hundred years the Japanese turned their backs to the world. They lived in almost complete isolation.

Opening up Japan. The opening up of Japan began about a hundred years ago. A new nation, the United States, was growing up on the opposite side of the Pacific. Steamships sailed back and forth across the North Pacific, past the very doors of Japan. Still Japan shut itself in, not permitting ships to stop for fuel or trade. Occasionally ship-

wrecked sailors were mistreated, after being forced to land on Japanese shores.

In 1853, the United States sent Commodore Perry with a fleet of four ships to open up Japan. He sailed into Tokyo Bay, and persuaded the Japanese to accept a letter from the President of the United States to the Emperor. This marked the end of Japan's "days of isolation."

Perry brought gifts, some of which greatly surprised the Japanese. One gift was a telegraph set. Another was a model locomotive. In all Japan, at that time, there were no such things.

A new Japan. It was a weak Japan that was open to the world after Perry's visit. Before long, however, Japan began to copy the ways of the Western World. The Japanese built factories and machines, made ships and guns. They built a modern army and navy. By 1900, Japan had become a strong country.

Population grew rapidly in this new Japan. So did industry and trade. Before World War II, goods made in Japan were sold around the globe. Japanese ships could be seen in every important harbor in the world.

The new Japan even looked different from the old. Electric power lines and smokestacks became a part of the landscape. Steel mills and shipyards grew up beside quaint villages. Cities grew larger and larger. They became more and more crowded.

Empire won and lost. As population, trade, and industry grew, the leaders of Japan set out to build a larger empire. Formosa (Fig. 117) was taken from China. After defeating Russia in war, Japan took the southern half of Sakhalin Island, and secured special rights in Manchuria (p. 160). Korea was added to the empire in 1910 (p. 171). Following the first World War, many of Germany's islands in the Pacific were put under the control of Japan. During World War II, the Japanese Empire spread swiftly over much of southeastern Asia and many islands of the Pacific.

Now the empire is gone. The Japanese

could not hold their gains. Japan is again about the size it was when it was opened up in 1853. Only the four large islands and some scattered small islands are left. Today, however, Japan's problems are much greater than those which the people faced a hundred years ago. Then, there were only 30 million people to feed. Now, there are almost 90 million. Perhaps the greatest question in Japan is: "How shall so many people make a living in so small and poor a land?"

Helps in Learning

1. Is Japan a tropical country? How can you tell?
2. Where in Japan is weather somewhat like that in parts of eastern North America?
3. Explain why the Japanese decided to lock foreigners out and lock themselves in.
4. How does the new Japan differ from the Japan of earlier times?
5. Look ahead at the other pictures in this chapter. Which of them suggest "the new Japan"?

Using Natural Resources

Farm lands. Japan's greatest natural resource is farm land. But farm land is scarce, for the islands are mountainous (p. 139). Only 16 acres out of every 100 acres can be used for crops. There is only as much farm land in all Japan as there is in England, which has half the population. We can easily understand, then, why Japanese farms are tiny, and why many of the Japanese farmers are poor.

The best farm land is in the lowlands. The picture on the opposite page shows what one lowland area looks like, from the air, in early summer. A modern highway runs through the lowland. Little groups of houses and trees stand like islands in the midst of water-covered rice fields. Footpaths follow narrow dikes between the tiny fields. As the rice grows, the scene will change from one of many small ponds to one of many green squares.

The two pictures on pages 182 and 183 show farm work in another lowland and in other seasons. In Figure 151, it is autumn, the time of the rice harvest. Figure 152 is a spring scene. The grain on the straw mats is newly harvested winter wheat, drying in the sun.

The village of Suye. The two colored pictures are scenes in a village called Suye, on the island of Kyushu (Fig. 117). This village is like many others in Japan. It also is somewhat like the Chinese village of Kaihsienkung, in the Yangtze delta (p. 145). Kyushu and the Yangtze delta are in almost the same latitude (Fig. 117).

In Japan the word "village" means more than a single group of houses. It stands for an area which may include many fields and several groups of homes. The village of Suye is about three miles long and two miles wide. In it there are several little groups of farm-houses, together with the fields which the farmers work. A few of the houses can be seen in the distance in Figure 151, beyond the stacks of rice straw.

The average farmer in Suye has only about three acres of land. This is divided into several scattered plots. It may take a farmer as much as an hour to get from one little plot to another. Many a barnyard in Canada is as big as an ordinary field in Japan.

Nearly every farmer in Suye has either a horse or a cow to pull his plow. There are no pastures, and no fences. Except when the animals are working, they are kept in small sheds near the houses. Grass is cut by hand and brought to them. Some farmers keep five or six chickens and one or two pigs.

Few farmers anywhere in Japan keep dairy cows. In general, the valley land is too precious to use for pasture. The natural grass on the hills is not good. Most Japanese do not like the taste of milk.

A Japanese home. The farm home in Figure 152 was made quickly and cheaply. It is built of wood which is never painted, inside

or out. The roof is thatched. There is no attic, no cellar.

Like the house in the picture, most houses in Japan are planned only for warm weather. Actually, these houses are not well-suited to the Japanese climate as a whole. As a rule, there is no way of heating the rooms in the winter. The floor of the house in Figure 152 is high enough off the ground so that air circulates underneath. It was built this way in order to avoid dampness. Large sections of the walls are sliding panels. When the weather is warm, the panels are pushed back to open up the rooms.

Within the house, reed mats cover almost all the floor space. "There are no rugs, carpets, or curtains, and no chairs, for people kneel or sit upon flat cushions which are stored in closets when not in use. Tables are used only at mealtime. . . . The walls separating the rooms are simply sliding screens travelling in grooves in floor and ceiling."

Such homes may seem rather empty and bare. But most Japanese prefer them to other kinds, especially as far as furniture and decorations are concerned. Even in the homes of wealthy Japanese there is little furniture.

A calendar of work. Spring is the busiest season of the year in Suye. This is both a time of harvest and a time of planting. The winter grains are cut in May, then threshed and dried on mats in the sun (Fig. 152). In the same month, rice is planted in seed beds. In June, it is transplanted to the main fields. At that time, the houses look deserted. Nearly every man, woman, and child is at work in the fields.

Silk is produced during spring, summer, and early autumn. Also during the summer, the farm people weed the rice fields, gather grass for their few animals, grow vegetables, and look after the irrigation ditches. In Suye the source of water, fortunately, is high enough so that little pumping is needed. Common vegetables are beans, sweet potatoes, cucumbers, and a kind of giant radish.



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Figure 150. Using every bit of land

Figure 152 shows a small plot of vegetables between the house and the mats where wheat is drying in the sun.

In spring, and again in autumn, a day is set aside for cleaning the narrow village paths. On the day selected, one person from each household helps with the work. These people cut away the weeds or brush, and sweep the paths clean. The village also must keep in repair a main road which leads to a near-by market town.

A bridge across a river in Suye is washed away by floods almost every summer. Until autumn, the people use boats when crossing the stream. Then, usually in September, a day is chosen for rebuilding the bridge. The village men do all the work, using logs, vines, and bamboo. No nails or bolts are needed in building this kind of bridge.



Figure 151. In the fields at Suye

In autumn, the leaves on the maple trees turn bright red, as they do in Canada. Frosts come in late October or November. Autumn is the time of the rice harvest, and the time for planting winter wheat, barley, or rye. In autumn, also, roofs are repaired. The grass used for thatch was cut the previous autumn and then dried for a year.

Winter is chilly. The people put on layer after layer of clothing to keep warm. From time to time, there are a few inches of snow on the ground. The farmers have time during the winter to make a few simple things such as rakes, baskets, tool handles, and straw mats. Tools made of metal are bought in the market town. In late winter or early spring, many women weave silk cloth on their household looms.

Rice. As we can see, the farmers have many tasks. The most important of all is work with rice. No other crop is nearly so valuable. Rice is the only thing in the village which is regularly kept under lock and key.

No other food is used so widely as rice. The Japanese word for a meal is the same as that for boiled rice. Rice is often used in making candies or cakes. It is a common gift at parties. Servants and roof-makers often get their wages in rice, instead of in money.

Producing silk. Silk is the chief source of extra money in Suye, as in Kaihsienkung (p. 145). A large part of the work is done by women and girls. The men care for the mulberry trees, and bring in the leaves. Since mulberry trees do not need irrigation, most of them are grown on the uplands.

For each "crop" of silk, a farmer first buys a supply of silkworm eggs. The worms which hatch from the eggs eat almost constantly for about a month. Japanese women or girls feed them mulberry leaves, both in the daytime and during the night. As the worms grow, they need more and more space. Before the month is over, the silkworm trays and the stands which support them fill most of the house. The family may be crowded into one room.

The picture in Figure 153 was taken in a Japanese home. A woman in the foreground is placing full-grown silkworms on a tray covered with straw. There the worms will spin their cocoons. Later, the fibres in these cocoons will be spun into silk thread. In normal times, most of the silk produced in Japan is shipped to the United States.

Change. In several ways farm life in Suye today differs from farm life there 50 or 75 years ago. Many things invented in the Western World have come into wide use in Suye, as well as in the rest of Japan. Now, there is a telephone in the village office. There are a few radios and sewing machines in the village. Most of the homes have electric lights. Poles carrying electric wires are shown in Figure 152. Nearly every home in Suye has a clock.

Some inventions have made farm work easier, but much of the work is still done by hand. Most farmers have small threshing machines, run by "foot power." The pedals on some of these threshers look somewhat like bicycle pedals. A few men have threshers that are run by gasoline engines or electric motors.

At one time, the people in Suye made almost everything they needed. Now, most of the things they use are made in factories. They sell silk or surplus field crops in order to buy cloth, tools, dishes, shoes, or other factory-made products.

As trade increased, Suye was drawn closer and closer to the near-by market town. A good road now connects the two. Several people go by bus or bicycle from Suye to the market town each day.

New ideas. Many new ideas, as well as new machines, have come to Suye in recent years. When the oldest man in Suye was a child, there were few schools anywhere in Japan. Now there are schools throughout the country. Nearly every Japanese child gets at least some education. In nearly every farm village there is a trained agricultural

adviser. He helps the farmers grow more and better crops.

Every day, newspapers are delivered to Suye from the market town. In summer, movies may be shown in the village, perhaps in the school building. So, in various ways, many new ideas have come. These new ideas are not only about farming but about Japan itself, and about the whole world.

Agriculture throughout Japan. In many ways Suye is a good example of most farm villages in Japan. There are places, of course, where farm work and crops differ, largely because of differences in soils or water supply or weather or nearness to markets. But, except in Hokkaido, the differences are not great and do not affect many of the people.

Here and there throughout Japan there are "upland farmers." These farmers have little or no land which can be irrigated. Their crops must depend on rainfall. Some of the upland farmers live in the mountains. Others

Figure 152. Outside a home at Suye





Figure 153. Tending silkworms

© Gendreau

have fields in the valleys—fields out of reach of irrigation. The upland farmers may grow many different crops, including a kind of rice which will grow without irrigation. Other crops are wheat, barley, oats, millet, and beans.

Market gardening is common near every large city. Fruit trees, too, are a common sight in Japan. Orange trees are most numerous. Other fruits include peaches, plums, apples, pears, and cherries. Most fruit trees are not irrigated.

Sewage from the cities and towns is commonly used on farms and in market gardens. This may spread disease. Visitors to Japan avoid eating any fresh vegetables unless they are certain the vegetables have no harmful germs.

Nearly all of the Japanese drink tea. For that reason, many people expect to find much land in Japan used to grow tea. Actually, little land is so used.

Farming in Hokkaido. The farm villages least like Suyue are those in Hokkaido, and in northern Honshu. This we should expect, because of the difference in climate (p. 177).

The picture on the next page was taken in Hokkaido. It is haying time. In a few minutes the hay on the wagon will be hoisted up and into the loft of the barn. This scene is certainly unlike the pictures on pages 181 and 182.

Except for the clothing, Figure 154 recalls farming in some parts of Canada—a silo, a big wooden barn, a team of horses, and a hay wagon. This resemblance is partly the result of a visit by American farm experts to Hokkaido more than 50 years ago. When the government of Japan was planning the settlement of Hokkaido, it invited some Americans to help with the planning. Naturally, the Americans suggested things they knew about in their own country.

The growing season is short and the winters are cold in Hokkaido (p. 177). Almost none of the land can be used in winter for a second crop. It takes more land, therefore, to support a family in Hokkaido than in southern Japan. The ordinary farmer in Hokkaido has 12 or 13 acres.

As in Manchuria (p. 162), so in Hokkaido, the larger farms demand different methods of farming. It is impossible for a man to cultivate 12 acres by hand. So most field work in Hokkaido is done with machines pulled by horses. These horses, and other farm animals, need good shelter in the bitterly cold winter. Large amounts of hay must be stored to feed them. For these reasons, the farmers of Hokkaido really need big barns.

The man who owns the barn in Figure 154 has a silo. He keeps a few dairy cows. The dairy products are sold, probably in Sapporo, largest city in Hokkaido (Fig. 117).

In spite of the short summer, rice is an important crop in Hokkaido. A special kind of rice has been developed which will ripen in a little more than three months after it is planted. Farmers also grow such crops as oats, wheat, millet, barley, beans, potatoes, and hay. The hayfields of Hokkaido would seem strange indeed to a visitor from Suyue.



Figure 154. Storing hay

© Three Lions

Most farmers in Hokkaido choose to live in isolated farmhouses, rather than in farm villages. Also, stoves are commonly used in Hokkaido for heating the houses.

Hokkaido is Japan's frontier land, although today there is little good land left that is open for settlement. When Japan was opened up in 1853, few people lived in Hokkaido. Later, settlement was encouraged, and thousands of Japanese moved there. Yet Hokkaido is still a thinly-settled land. Most Japanese do not like the cold climate. Thousands of pioneers have returned to their old homes, discouraged by the weather and by the hardships of life in a new country.

Things in common. As we have seen, there are differences in ways of farming in various parts of Japan. In spite of this, Suze is a good

example of most Japanese farm villages. In most of the country, the outstanding crop is rice. Rye, barley, and wheat are important winter or upland crops. Silk is the leading "extra money" crop. Most farming depends on irrigation from mountain streams.

Resources in fish. Since farm land is very scarce in Japan, it is fortunate that the country has great resources in fish. Fishing is more important to Japan than to any other country in the world. The Japanese eat fish at almost every meal. Next to rice, fish probably is the most important food used in the country. One out of every five Japanese gets some income from the fishing industry, working either part-time or full-time. Thousands of fishermen are part-time farmers.

The two pictures on the next page are



Figure 155. Drying fish

common scenes along the coasts of Japan. In Figure 155, men are putting fish out to dry. In the lower picture, men are pulling a small fishing boat up on the beach. The fishermen in the distance are using similar boats.

Many Japanese fishing villages are called "shoestring villages," because the houses are strung out in a line along a beach. In most fishing villages, the beach may be crowded with boats, nets, drying fish, or big kettles.

Nine out of ten fishermen in Japan never go far out to sea. They are coastal fishermen, like those shown in Figure 156. Their little boats are always close to shore, so they can land quickly in case of storm. A few boats have engines, but most coastal fishermen depend on oars or sails.

Deep-sea fishing in Japan is "big business." Modern steam trawlers may stay out for days or weeks at a time. Many of them have refrigeration equipment. Before World War II, great ships, called "floating canneries," sailed

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Figure 156. Fishermen beaching their boat



all the way to the coast of Alaska, catching and canning huge amounts of fish while at sea. After the season was over, they returned to Japan.

Hundreds of different kinds of fish are caught in Japanese waters. In value, the sardine leads all others. Among other important fish are herring, mackerel, trout, and cod. The fish shown in Figure 155 are called *bonito*. Dozens of fish have names scarcely known in our country.

Many fish are eaten fresh. Others are dried, salted, canned, or used in making fish oil or fish fertilizer. In normal times, canned fish and fish products are important exports.

Many things have encouraged the growth of a great fishing industry in Japan. Some of the best fishing grounds in the world surround the Japanese islands. Along the coast are hundreds of bays which provide protection for small boats. And in this poor and crowded land, people naturally turn to the sea for a living.

The forest resources. More than half of Japan is covered with trees. Scarcely any landscape, outside of the cities, is without them. Most of the forests are in rough and mountainous areas unsuited to crops. Many forest workers, like many fishermen, are part-time farmers.

The forests have many uses in Japan. They supply wood pulp for paper mills. Wood is a common building material (p. 180). Wood, and charcoal made from wood, are important fuels. Each year the charcoal produced is worth almost as much as the lumber cut.

The Japanese forests are of great value, quite aside from supplying various products. Forests help to prevent rapid run-off of storm waters. This keeps the soil from washing away. It avoids serious floods in the lowlands. It helps to maintain a constant supply of water for irrigation.

This even flow of water is important also in the production of hydro-electric power. Most power plants would have little value

if there were water in the streams for only a few weeks or months in the year.

In general, the forests are well managed. Japan looks upon its forests as resources which can be renewed forever. This is fortunate for all the people. If the forests were used carelessly, the entire country soon would suffer.

Mineral resources — hydro-electric power. On the whole, Japan is poor in mineral resources. Only four are important—coal, gold, copper, and sulphur. Nearly all the coal produced is mined in northwestern Kyushu, or in Hokkaido.

Japan is particularly poor in such important minerals as iron ore, petroleum, and bauxite for aluminum. It is natural, then, that many industries in Japan must depend on imported minerals. Japan produces no more petroleum in a year than Canada produces in a week.

The use of hydro-electric power makes up in part for the scarcity of petroleum. Conditions are favorable for the production of hydro-electric power. Rainfall is abundant (Fig. 107). There are thousands of streams tumbling down the mountain sides. Almost every Japanese village, from one end of the country to the other, has electric light. In some places, the people pay a certain fee for the number of light bulbs they use, rather than for the amount of electricity they use. As this suggests, electricity is very cheap in Japan.

Helps in Learning

1. Read again the story of Kailshienkung in China (p. 145). Compare it with the story of Suye. In what ways are the two villages alike? In what ways are they different?
2. Why are there few dairy cows in Japan as a whole? Tell why there are more in Hokkaido than elsewhere in Japan.
3. What do you think farm life in Suye would be like today if Japan had remained in isolation?
4. Tell several ways in which farm life in

Hokkaido differs from farm life in Suze. Give reasons for the differences, if you can.

5. What reasons can you give that help to explain why many Japanese have turned to the sea for a living?

6. Tell why Japanese forests are important to Japanese farmers.

7. Why is hydro-electric power particularly important in Japan?

Manufacturing, Trade, and Transportation

Main industrial region. About half of all Japanese workers are farmers, fishermen, forest workers, or miners. Most of the other workers in the country depend on manufacturing, trade, or transportation for a living.

The main industrial region of Japan is shown in the map below. It extends along the coasts from Tokyo to Nagasaki. Within this region are three-fourths of the factory workers. As Figure 157 shows, this industrial area includes most of the large cities in the country. It also includes many small cities, market towns, and farm villages.

Japanese factories. The picture on the opposite page was taken near the coast of northwestern Kyushu. This part of the main in-

dustrial region leads in heavy industry. Crowded into a narrow lowland are blast furnaces, steel mills, cement works, oil refineries, shipyards, fertilizer factories, and chemical plants. The air is full of smoke. Strong odors are everywhere. Jammed close together are the homes of half a million people.

Many industries find a considerable advantage in their location in northwestern Kyushu. Japan's leading coal mines are near-by (p. 187). Nevertheless, huge amounts of coal, as well as iron ore, must be imported for the iron and steel industry. Most Japanese coal is not good coking coal.

In Japan as a whole, most factories do not look like those in Figure 158, because most manufacturing is light industry, not heavy industry. Among the light industries, textile mills and clothing factories are of greatest importance.

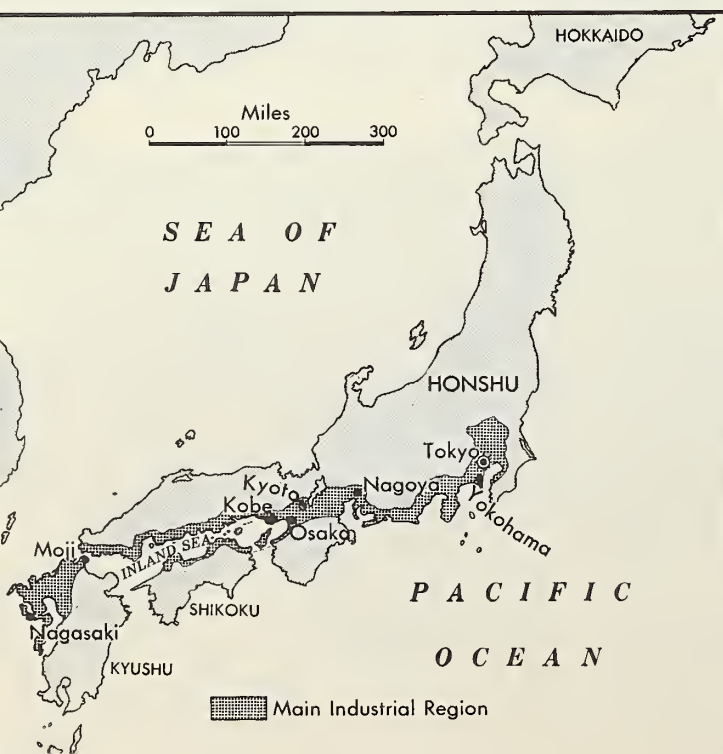
There are countless very small factories in Japan. More than half of the industrial workers are employed in "household factories," none of which has as many as six employees. So the most common factory in Japan is part of a home. The entire labor force in such a factory may consist of the members of one family and, perhaps, a hired relative or two. Going home from work means going into the next room.

Many of these small factories use local materials to make such things as straw mats, pottery, silk textiles, fans, and various kinds of food. Some household factories fit into nationwide organizations. In such cases, a household factory may make a few simple parts of a bicycle, for example. These and other parts are then assembled somewhere else, perhaps in another household factory.

Japanese trade. Almost as many people in Japan make a living from trade as from factory work. Workers in trade include all who buy or sell for a living. Some sell to their neighbors. Others sell goods overseas. One may sell trainloads of iron ore, another may

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Figure 157. Japan's leading industrial area



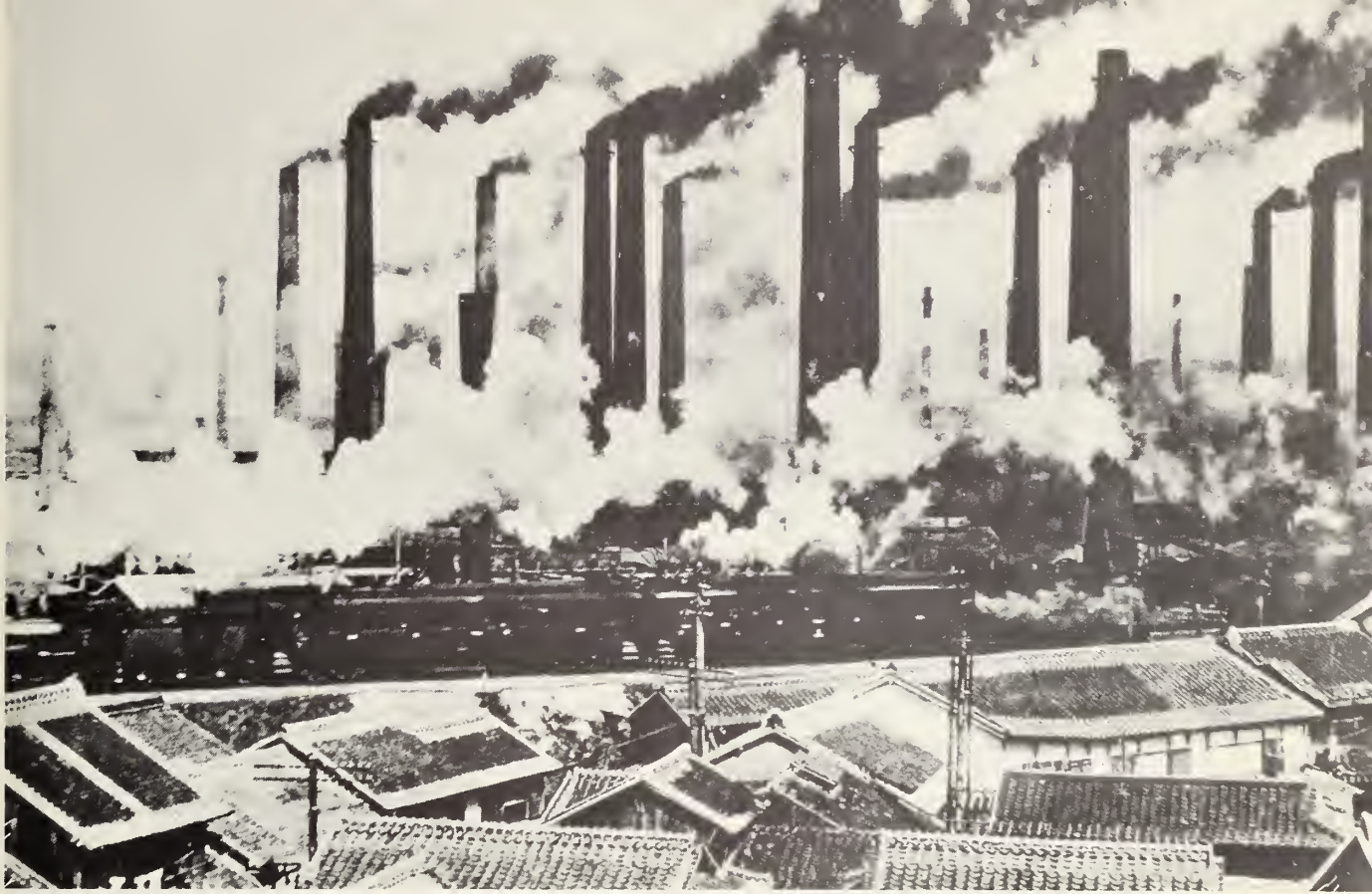


Figure 158. Busy, smoky mills

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buy silk from farmers, still another may sell candy to workers' children. But all three make a living from trade.

Trade with foreign countries is particularly important. Raw materials must be imported in order to carry on manufacturing. To pay for such materials, goods must be exported.

In the past, many Japanese exports sold for surprisingly little money. For example, few countries could compete with Japan in making and selling cotton textiles. The very low wages paid to workers in Japan help to explain this. Another reason for this is cheapness of hydro-electric power in Japan.

Before World War II, Japan's two leading exports were raw silk and cotton textiles. These were followed by a big group of "machines and machinery," including electrical goods, bicycles, tools, and the like. The use of much nylon and an increase in the price of raw cotton were important news in Japan. Yet Japan remains an important manufacturing

country. Cotton, rayon, and wool are now the most important Japanese textiles. Although iron and steel production is only one-tenth that of the United States, Japan is one of the world's great steel manufacturing countries.

Highways of trade. In Japan there are many scenes much like the one in Figure 159, for ocean highways are of great importance to the country. Thousands of ships sail back and forth along the coasts, carrying freight from city to city. Other ships sail to foreign lands. Japan is presently the leading shipbuilding country in the world. Osaka and Kobe are Japan's most important shipbuilding cities.

In the picture we are looking toward Moji, at the western entrance to the Inland Sea (Fig. 157). This well-protected sea is particularly busy with shipping. Through it passes a main ocean route from North America to the continent of Asia. The shores of the Inland Sea are lined with the cities and towns



Figure 159. On the Inland Sea

© Ewing Galloway

of Japan's main industrial region (Fig. 157).

On Japanese railroads and highways, passenger traffic is more important than freight traffic. Most highways are narrow and winding. In the stream of traffic there are few trucks or private cars, but many bicycles, carts, wagons, and taxicabs. About four out of five cars in Japan are taxicabs. Not many people can afford to buy either an automobile or the gasoline it requires.

Few rivers in Japan are of much use in carrying freight. Most of the streams are too short, too shallow, or broken by falls in too many places.

Air transportation should have a great future in Japan. By air, one can quickly get over the steep mountains, or go from island to island.

In village, town, and city. Workers in manufacturing, trade, and transportation are widely scattered in Japan. Even in Suze there are a few shopkeepers, a basket-maker, and several people who work in a household factory. People in Suze can travel by bus to their market town, where there are still more shopkeepers, factory employees, and transporta-

tion workers. Both a bus line and a railroad connect the market town with a small city, where there are thousands, instead of hundreds, of such workers. Finally, of course, the small cities are tied to the larger ones, by land, sea, or air.

Each part of Japan is thus tied to other parts of the country. Each village, town, and city depends more or less on many another village, town, and city. Each group of workers depends on almost every other group, whether farmers, merchants, or factory workers.

Six great cities. When Japan was opened up in 1853, there were no large cities in the country. Today, Japan has many large cities. The leading six are Kyoto, Kobe, Osaka, Nagoya, Yokohama, and Tokyo (Fig. 117). All six are important railroad centres. All six are in lowlands. All six are in the main industrial region of Japan (Fig. 157). All except Kyoto are seaports, and Kyoto is only about 25 miles from the sea.

Kyoto looks the least modern of Japan's six great cities. For hundreds of years it was the capital. Before the war, thousands of tourists came each year to see the old palaces,



Figure 160. In the heart of Tokyo

© Three Lions

the temples, and the beautiful countryside. Kyoto has many workshops which specialize in textiles. A law forbids the building of large factories in the city.

Kobe and Osaka are twin cities on the Inland Sea (Fig. 157). Both are crowded industrial cities, with textile industries, shipbuilding, and metal manufacturing. Osaka is much the larger of the two. Kobe, across the bay from Osaka, grew up as the port for Osaka. The largest ocean ships can anchor in the deep-water harbor at Kobe, but they cannot enter Osaka harbor.

Nagoya is at the head of a shallow bay southwest of Tokyo (Fig. 157). Like Kyoto, it is a great textile centre. Most of the work is done in household factories. Recently such products as clocks, toys, and bicycles have become important, too. Since Nagoya lacks a good harbor, it has not become a leading port.

Tokyo and Yokohama. The picture above is a scene in the heart of Tokyo. This city of more than ten million people is Japan's capital, and one of the large cities of the world. Of all Japanese cities, Tokyo undoubtedly is best known to people from the western world. The forces which occupied Japan after World War II made their headquarters in Tokyo.

As the picture suggests, the central business district of Tokyo is much like that of many Canadian cities. There are streetcars, buses, automobiles, and tall buildings. Traffic keeps to the left, however, instead of to the right.

Downtown Tokyo is new and modern, partly because of an earthquake and fire which in 1923 destroyed nearly half the city. The Japanese replanned their city before they rebuilt it. In their plans they provided for much better buildings and much wider streets than they had before the big fire.

Most of the outlying districts of Tokyo look much less modern than the downtown district. In that way, Tokyo resembles most Japanese cities. Away from the heart of the city, thousands of unpainted houses are crowded close together along narrow streets. In some places, there are no sidewalks. Many buildings are part house and part factory or part shop. Most shops are open to the street during the day, and boarded up at night. The owner and his family may live upstairs or in the back rooms.

As Kobe is the port for Osaka, so Yokohama is the port for Tokyo (Fig. 157). Large ocean ships cannot reach Tokyo, at the head of shallow Tokyo Bay. There is deep water at Yokohama, near the entrance to the bay. When Perry sailed into Tokyo Bay in 1853, Yokohama was a fishing village with only a few hundred people. Now its population is more than one million. It has grown so much largely because it is the port for Tokyo.

The Tokyo-Yokohama area is one of the largest centres of industry in Japan. In factories, large and small, workers turn out textiles, electrical goods, books, machinery, and many other products. Yokohama is a great silk port, for central Honshu produces a large part of the world's silk. Both cities have the advantage of hydro-electric power from mountain streams not far away. The plain to the north and west of the cities is the largest in Japan, and one of the most thickly settled.

Japan and the Western World

A look ahead. Ever since Japan opened its doors to western ideas and western trade, it has vastly improved its way of living. Japan learned much about modern industry and agriculture from the countries of the Western World. Japanese students studied in universities in western Europe, Canada, and the United States. Missionaries from Europe, Canada, and the United States went to Japan. From time to time, experts from the West-

ern World were called in as advisers to the government (p. 184). For years, Japan traded more with the United States and Britain than with any other countries. The two countries did more business with Japan than with any other country in Asia.

Finally, in 1941, Japan declared war on the United States and Britain. In 1945, Allied forces occupied Japan. One of their tasks was to help the Japanese build a new kind of government. Another was to show them how to make a living without the resources of an empire controlled by force. Only time can tell how successful the Allies were. Thus far, they have been successful.

With or without empire, Japan's great problem remains: How shall many people make a living from little land? The country does produce most of the food it needs. But, as we have seen, there are many people in Japan who depend on foreign trade for a living. Japan must buy raw materials abroad, and it must sell in foreign markets millions of dollars' worth of goods made in Japan.

Japan's future is being answered by the inventiveness and energies of her people. They are cultivating their lands in the most modern manner, manufacturing goods that will compete in world trade, and regaining the friendship of other nations.

Helps in Learning

1. What is meant by "household factories"? How important are they in Japan?
2. Why is foreign trade of great importance to Japan?
3. Explain why an increase in the price of raw cotton in India or the United States is important news in Japan.
4. How does traffic on Japanese highways differ from that on most highways in Canada?
5. "Each group of workers depends on almost every other group." Give examples which show that this is true.
6. How has work in Japan been affected by the fact that Japan is an island country?



Figure 161. On a small farm

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THE PHILIPPINES; OTHER ISLANDS

A young country. On the fourth of July, 1946, there was a great celebration in the Philippine Islands (Fig. 117). On that day the Republic of the Philippines became an independent country. From 1898 until 1946, the Philippine Islands had been a possession of the United States. For more than 300 years before 1898 the islands had belonged to Spain (p. 10). Now, little by little, the people are learning both what they have gained and what they have lost by independence.

Island people. All together there are more than 7000 islands in the Philippines. Most of them are so small they have neither names nor inhabitants. Much more than half of the land is in two islands—Luzon to the north and Mindanao to the south (Fig. 117). Manila, the capital city, is on Luzon Island.

The people of the Philippines are called Filipinos. They resemble the Malaysians. Their first official language was Spanish. Then came English. The new government has chosen Tagalog as an official language.

This is one of the important native languages.

Farming. Most Filipinos depend on farming for a living. In general, the islands are mountainous (Fig. 117). But there is much good farm land in the lowlands and on the lower mountain slopes. In most places, the rainfall is heavy (Fig. 107).

The picture in Figure 161 shows a small part of a farm which is like many others in the Philippines. It is a farm of only a few acres. The farmer has a water buffalo to pull a plow or a cart, but he does much farm work by hand. Each year, part of the crops is given to the landowner as rent.

The farm family lives in a simple home, built for coolness. Most of the food for the family is grown on the farm. In the picture, bundles of newly-harvested rice have been set out to dry. A banana tree and several palms are in the background.

About half of the farm land in the Philippines is planted to rice, the leading food crop. Corn is second in importance as a food. The Filipinos also have a wide choice of fruits and vegetables, including bananas, coconuts, beans, and sweet potatoes. Fish is the most common meat.

Figure 162. Philippine lumber for American markets
C.W.S.



Almost every farmer grows some crops for sale, besides food for his family. The most important of these are sugar, coconuts, and hemp. Sugar cane is always important. Nearly all of it is grown, not on plantations, but on small farms such as the one shown in Figure 161. Some of the sugar is exported to the United States.

The coconut crop of the Philippines is important, often more valuable than the sugar crop. In the lowlands southeast of Manila (Fig. 117), there are "forests" of coconut palms. Entire shiploads of coconut oil or of copra are exported to the United States. Copra is the dried meat of the coconut.

To the world, another important export of the Philippines is Manila hemp, or abacá. This is a strong fibre, used in making a kind of rope well suited for use on ships, or in salt water. The fibres are found in the leaves of a plant closely related to the banana. During World War II, there was a serious shortage of abacá all over the world. Ships needed more rope than ever before. But the Japanese were in control of the Philippines, and little abacá is grown anywhere else in the world.

Plenty of land. People in the Philippines have one great advantage over people in Japan, Korea, and China. The Philippines are not nearly so crowded. When the United States took over the islands in 1898, the population was about seven million. It has increased to more than 20 million. Still there is room for many more, particularly in the island of Mindanao (Fig. 117). Before World War II, many Japanese settlers had moved to Mindanao.

Partly because farm land is not scarce, much of it has been wasted. Some Filipino farmers clear new land from time to time and abandon older fields which were not well cared for. Heavy rains have washed away the soil on many mountain slopes. In general, crop yields are lower than in most neighboring countries.



Figure 163. Where gold is mined

© Fenno Jacobs, from *Three Lions*

To market. Since the Republic of the Philippines is a country of islands, it depends much on trade and travel by sea. Many hundreds of ships, large and small, tie the islands together. Products and passengers alike move by ship.

Figure 117 shows that there are few important railroads in the islands. Good highways also are scarce. As we might expect, the use of airplanes is increasing rapidly.

One of the great needs is the building of farm-to-market roads. In most places in the Philippines this would mean the building of comparatively short roads from the interiors of islands to village seaports. Such roads would do much to increase settlement in lands now unused.

The picture on the opposite page was taken at a village seaport on the north side of Mindanao (Fig. 117). This island, and more than half of all the land in the Philippines, is forested. Many of the trees have

valuable wood. The sea makes it easy to get at much of the forest, and easy to get the products to market. The ship in Figure 162 is loading lumber. Lumber is the leading product of the island.

Gold, iron, and chromium. Figure 163 shows a small gold-mining centre in northern Luzon. Only a few dozen workers are needed. Most of them live in small, square, grass-roofed houses. They grow some of their own food in forest clearings. Some mining centres in the Philippines are much larger than this one. Others are even smaller.

Although mining has grown tremendously during recent years, it is far from being as important as agriculture. Modern mining machinery has helped much to make this growth possible. The leading minerals include gold, chromium, copper, silver, manganese, and iron. Before World War II, most of the iron ore was shipped to Japan. There is almost no coal or petroleum in

the Philippines. Some hydro-electric power plants have been built, but much coal and petroleum must be imported.

Manila. The capital city, Manila, has been the leading centre of population, trade, and industry since earliest days. In World War II, it became a battlefield. Nearly half the city was destroyed, including most of the port area. In spite of this destruction, Manila remained the chief city of the Philippines. Now it has been largely rebuilt.

Each year Baguio, a little city in the mountains becomes almost "the summer capital." As soon as school is out in the spring, the wealthier families travel there, by automobile or train, as Canadians do to the Laurentians or the Rockies. The weather in the mountains is delightfully cool, though it may be unpleasantly hot at Manila, on the coast. Unfortunately, few of Manila's people can afford to spend a summer in the mountains.

With independence. Many problems have come to the Philippines with independence. While the United States owned the islands, millions of dollars were spent on such varied things as education, public health, and highways. As the Filipinos go on with this work by themselves, they may well find that money to make needed improvements is scarce.

Before long, too, there may be a serious problem regarding foreign trade. Before independence, the products of the Philippines entered the United States, their best market, without paying any import tax. The United States now plans that, in time, products imported from the Philippines shall be taxed just the same as products from other foreign countries. When that happens, the Filipino farmers probably will get less money for their crops, particularly sugar. Then they may export less, and the Philippines may be able to buy fewer goods from other countries. If trade declines, many Filipinos will have a harder time than ever to make a living.

Some people believe that in the future the Philippines may grow less sugar cane. In-

stead, the farmers might grow more cotton, cassava, or rubber. For these things they might find a better market. Also, it is possible that the Filipinos could make at home many of the things which they now buy abroad. For example, home-grown cotton might be turned into cotton cloth, large amounts of which are now imported.

The United States has promised to defend the Philippines from attack. The Filipinos themselves, however, must solve most of the problems that came with independence.

Other islands in the western Pacific. As Figure 117 shows, there are many islands in the western Pacific other than those belonging to Japan or the Philippines. Because of location, some of the small islands are as important as some larger ones. In the vast Pacific, even very small islands are prized as stepping-stones. Ships or planes can stop at them for fuel or repairs. Such islands may also be valuable in a military way. They are sometimes called "unsinkable aircraft carriers."

Britain and the United States control many small islands in the middle and western Pacific. These include Fiji, Samoa, Tonga, Guam, and others. These stepping-stone islands are of tremendous value to both countries. They are also a source of protection to the Filipinos.

Helps in Learning

1. How do the Philippines compare with Thailand, in latitude? What does this suggest about weather in the two countries?
2. Both Japan and the Philippines depend much on one kind of transportation. What is it? Why is it so important to these countries?
3. Describe an important problem that has come to the Philippines with independence. What might be done to help solve this problem?
4. Why is airplane transportation well suited to the Philippines?
5. Some small islands in the Pacific are more valuable than some large islands. Why?

THE NETHERLANDS AND INDONESIA

Scattered lands. The Netherlands is one of the smallest nations in Europe (Fig. 6o). Yet it is much more important than its size alone would indicate. One reason is that it has close connections with lands in other parts of the world. One of these lands is Indonesia, a large group of islands located off the southeast coast of Asia (Fig. 5).

The Netherlands

Low country. The Dutch word “nether” means low. The name Netherlands therefore means low lands. The map on this page and the map in Figure 6o show that the Netherlands is a low country. Nearly half of the country is below sea level. Almost all the remainder of it is less than 500 feet above sea level.

A sandy coast. The Netherlands may be divided into three regions, a sandy coast, polderland, and an area of higher land commonly called “eastern Netherlands.”

The sand dunes which line most of the coast are natural dikes. They help to hold the sea away from the lands which are below sea level. Man-made dikes have been built to fill gaps between the dunes.

Hundreds of years ago fishermen settled on these dunes. The tops of the dunes were dry. There was good fishing in the sea and in lakes which covered much land. Today, farm lands occupy much of the land once covered by these lakes, but fishing continues in the sea. There are also many summer resorts along the coast.

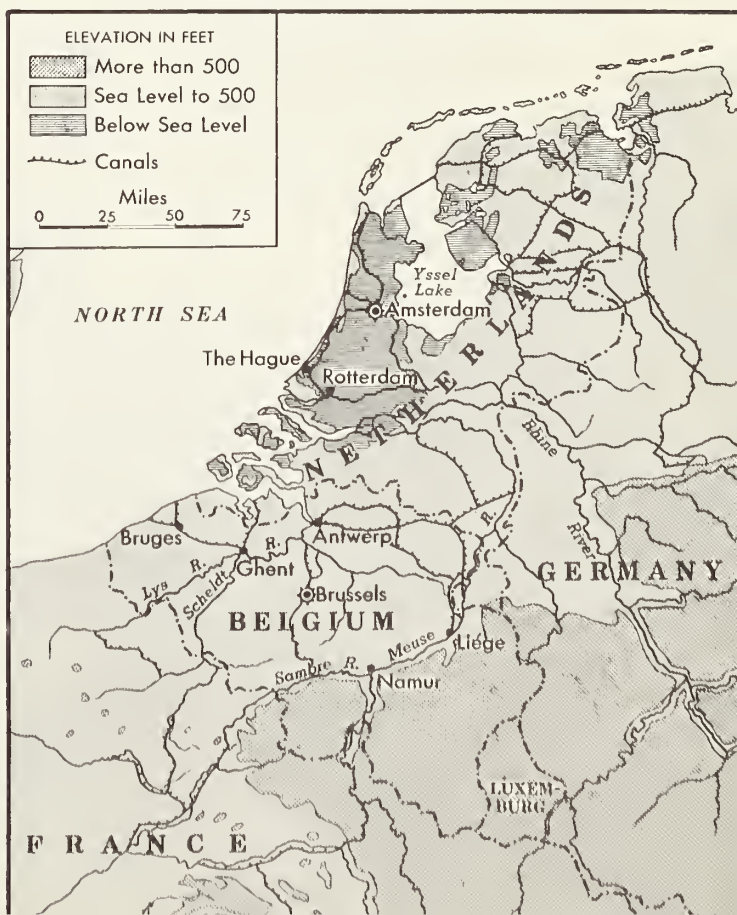
A city called The Hague, Figure 6o, is at the inner edge of the dunes. This city is the

home of the Dutch Parliament and the home of the Queen of the Netherlands. However, the capital of the Netherlands is Amsterdam (Fig. 6o).

Polderland. In general, polderland is the land below sea level in western and northern Netherlands (Fig. 164). At one time swamps and shallow lakes and the sea itself covered most of this area. Since that time the water has been drained away. Where fishermen once dropped their nets, there now are fine farms and towns and cities.

The Dutch people have been working for hundreds of years, draining this region. They first built dikes, then pumped the water off

Figure 164. Netherlands and Belgium



the land into canals, into rivers, or into the sea itself. The fields which resulted are called polders. So the entire region has come to be known as "polderland."

The work of pumping goes on day after day, and year after year. Water continues to seep in from the rivers, the canals, or from the sea. Frequent rains add to the problem.

Sometimes there is not enough rain. Then water may be pumped from the canals back upon the land, in order to save the crops. In times past, the Dutch used their famous windmills to do most of the pumping. Now, pumps driven by engines or electric motors are taking the place of the windmills.

Polderland is the best land in the Netherlands. A large part of it is in pasture, although many fields are planted to wheat, barley, sugar beets, potatoes, or flax. Most of the farmers make a living from dairying. In this cool, damp climate, cattle can graze in the open during most of the year.

In some places just behind the coastal dunes, the land in polders is used for garden farming. The picture at the top of the next page shows one such place. Several of the fields are planted to cabbages. Tomatoes and grapes are growing under glass, in the hot-houses. Many neighboring fields are planted to other vegetables or fruits, or perhaps to flowers, such as the famous Dutch tulips. Vegetables and flowers are important exports of the Netherlands.

Dutch farmers have had setbacks. Severe storms and high tides have flooded thousands of acres. During World War II, some of the dikes were cut in order to hold back advancing armies. As the waters spread out over the land, many homes and villages were destroyed. Salt water from the sea spoiled some of the soil for years to come. The work of reclaiming the land still goes on.

In years to come, the Netherlands may have much more land than it has today. Year by year the Dutch are taking new land away from the sea. Their biggest project is draining

Yssel Lake, Figure 164, which once was the Zuider Zee. Already cattle are grazing among the wrecks of ships. These ships still lie where they sank when this area was under the sea.

Eastern Netherlands. As Figure 164 shows, the eastern part of the Netherlands is slightly higher than polderland. For years it was also more backward, since much of the land is rather sandy. Recently, however, this region has become a better farming area than it was, largely because of the use of fertilizers. Rye, buckwheat, and potatoes are grown in many of the fields. In eastern Netherlands, as in polderland, dairying is of more importance than the growing of field crops.

Made in the Netherlands. Factories are scattered here and there in all parts of the country, from the sand dunes along the western coast to the sandy fields of eastern Netherlands. In the country as a whole, there are twice as many factory workers as farmers.

Many raw materials used in Dutch factories are produced on Dutch farms. These raw materials are used in cheese factories, beet-sugar factories, meat-packing plants, flour mills, and the like. Other materials are brought from Dutch lands in the Americas or from Indonesia. Among these are raw sugar, rubber, petroleum, copra, tobacco, and coffee. Still other materials for use in factories are imported from foreign countries. There is a great variety of such materials, including iron and steel, cotton, wool, grain, chemicals, and machinery.

Raw materials from several lands may be combined in making finished products. These products are marketed far and wide. Millions of people in our own country, and in other lands the world over have bought cheese, butter, cloth, radios, diamonds, shoes, tools, or electric light bulbs made by the people of the Netherlands.

The picture in Figure 166 is a common industrial scene. The barge in the foreground is tied up at the dock of an oil company. In the background is a large chemical



Figure 165. A fertile countryside

© Burton Holmes, from Ewing Galloway



Figure 166. A busy industrial centre

© Ewing Galloway

factory. Canals like the one in the picture reach nearly every city in the country.

Reasons. There are many reasons why manufacturing has become important in the Netherlands. It had an early start there when, years ago, Dutch trading ships began to bring tropical goods from the Indies (p. 10). Building dikes and making new land helped, too, because many factories use farm products, and because farm people are good customers for factory-made goods.

The location of the Netherlands has been a great help to manufacturing. Many needed raw materials are found only a few miles away, in neighboring countries. These countries also are a vast market for Netherlands products. As Figure 66 shows, some of these near-by lands are as thickly settled as any in Europe. At the front door of the Netherlands is the sea, highway to the world.

As the population map (Fig. 66) shows, the Netherlands itself is a thickly settled land. It seems natural, then, that many Dutch people should turn to manufacturing. Only a small part of the population could make a good living from the land.

For a time, manufacturing in the Netherlands was held back because of lack of fuel. Later, the Dutch discovered valuable coal deposits in the long arm of their country which extends south along the Meuse River (Fig. 164).

Centres of trade. The Netherlands is one of the great trading countries of the world. The chief centres of Dutch trade are Amsterdam and Rotterdam (Fig. 60). These two cities are also the leading ports of the Netherlands, although neither city is on the sea-coast. The sand-dune coast provides no good harbors. Amsterdam is on the shore of Yssel Lake, and Rotterdam is on a river in the delta of the Rhine.

Only small boats can navigate the natural waterways leading to Rotterdam and Amsterdam. Deep canals have been dug to let large ocean ships reach these cities.

Amsterdam is the largest city in the Netherlands. It is outstanding also because it is the capital, a great banking centre, and the chief port for trade with related lands. Amsterdam is famous for its diamond industry—the cutting and polishing of diamonds brought from Africa (p. 44).

Rotterdam is one of the greatest ports in the world. The docks stretch for miles along the river. Millions of tons of cargo are loaded or unloaded each year. Much of this freight is on its way to or from cities of the Rhine Valley, in Germany, Switzerland, or France. As Figure 60 shows, the Netherlands controls the mouth of the Rhine River. Rotterdam is the gateway to the Rhine Valley. At Rotterdam, much freight is transferred from ocean ship to river barge, or from barge to ship.

Within the Netherlands, and in neighboring lands, is one of the finest transportation networks in the world—canals, highways, railroads, airways. The ocean, of course, is the chief highway to distant countries. In one way or another, good trade routes reach out in almost every direction from the Netherlands, to other countries in Europe, to other continents, and to Indonesia, on the opposite side of the world.

Helps in Learning

1. Why should we expect weather in the Netherlands to be more like that of Britain than like that of France?
2. How is it possible for the Dutch to use land which is below sea level? Are Amsterdam and Rotterdam above, or below, sea level?
3. Figure 66 suggests one reason why the Dutch are eager to reclaim more and more land. What is the reason?
4. What farm products are used in factories?
5. Give three reasons for the development of manufacturing in the Netherlands.
6. With the help of a map explain why Rotterdam is a more important port than Amsterdam.



Figure 167. Planting rice in Java

© Screen Traveler, from Gendreau

Indonesia

A new nation. Figure 117 shows a group of islands which lie, in general, between the mainland of southeastern Asia and Australia. Before World War II, many of these islands were Dutch colonial possessions, and the colony was called the Netherlands Indies. In 1949, all of the Netherlands Indies except the western half of New Guinea became an independent nation, taking the name Indonesia.

Java. By far the most important island in Indonesia is Java (Fig. 117). This island is one of the most thickly settled lands in the world. It is not much larger than the island of Newfoundland, yet it has more than 40 million people. The rest of Indonesia is more than 10 times as large as Java, but has

less than half as many people. It is not strange that these lands outside Java are called the "outer provinces."

The picture above was taken in central Java. Here, as in parts of China and Japan, land is precious. Nearly every acre is used to grow crops.

The trees in Figure 167 may hide several farm villages. The life of a village probably is seen best in its crowded market place. "A constant stream of gaily dressed people moves in and out of the market. . . . They stop to bargain, to gossip, to eat or drink. If the purchaser desires a snack of rice and fish, he gets them served on bits of green banana leaf. . . . The barber strolls through the crowd and, upon request, sets down his stool and starts to work. . . .

"Fruits, vegetables, spices, native medicines, beads and jewelry, fowls, fish, meat, baskets, mats, and metalwork are spread temptingly on the ground or exhibited in booths."

Advantages for farming. Most people in Java are farmers. Several natural advantages help them make a living. As Figure 107 shows, there is abundant rainfall in Java. The soil is unusually fertile. It is called volcanic soil, because part of it came from the ashes of volcanoes. In the mountains which reach from end to end of Java (Fig. 117), there are more than a hundred volcanoes.

Another advantage is that the growing season never ends in this tropical land. Harvest may come at any time of year. On the same day, one may see people planting rice and other people harvesting rice, in neighboring fields. With the help of irrigation, three crops of rice may be grown, one after another, in the same field during one year.

For food. Most farm land in Java is used for growing food. A large part of the crop land is planted to rice or corn. Other common food crops are cassava, sweet potatoes, peanuts, and soybeans. Sugar is both an important food crop and a leading export crop.

Farm equipment is as simple as in most other rice-growing lands in the Orient. An ordinary farmer has a plow, a heavy hoe, a wooden harrow, and a harvesting knife. Either an ox or a water buffalo pulls the plow or harrow. A tremendous amount of work is done by hand.

For export. When Europeans first traded with the East Indies (p. 9), they were more interested in spices than in anything else. Spices still are grown there, and exported. Long since, however, other exports became far more important.

Before World War II, the chief exports of the Netherlands Indies were rubber, sugar, tea, tobacco, coconut oil and copra, and petroleum. In return, the islands imported cloth, iron and steel, machinery, and many other

manufactured products. It was this export-import trade which made the Netherlands Indies so valuable to the Netherlands.

Outer provinces. Most of the land in the outer provinces is in three large islands, Sumatra, Borneo, and Celebes (Fig. 117). Some parts of these islands, for example the interior lands of Borneo, are little known to the outside world. In such places there are native tribes that few white men ever have seen.

Dense tropical forests cover much of the land in the outer provinces. Large areas have been cleared for native farming, however, and for plantations. Sumatra, for example, has many rubber plantations and coconut plantations.

Pioneers in the tropics. In recent years, thousands of people have moved from crowded Java to the thinly-settled outer provinces. There they have built new homes, and organized new villages. The pictures on the next page tell the story of a pioneer settlement in eastern Sumatra.

The first task of the pioneers is shown in Figure 168—the dense forest must be cleared away. To these people, timber has little value. They burn it whenever possible, in order to get rid of it.

Figure 169 shows a clearing only three months after the trees were cut down. A farmer has built a simple house, and planted his first crops. Banana trees already are spreading their wide leaves. The farmer is standing in a patch of cassava.

The third picture shows part of the same clearing nearly three years later. The farmer is getting along well in his new home. He has harvested good crops of rice, bananas, corn, and cassava. His new house is much better than the cabin he first built.

Jakarta. The capital and largest city of Indonesia is Jakarta, in Java (Fig. 117). Until 1950, Jakarta was called Batavia. The population of the city is about two million. Most of the people make a living from trade or



Figure 168. Clearing land for a new home



Figure 169. The same place, three months later

Figure 170. The same place, three years later





Figure 171. Modern industry in Borneo © Three Lions

government work. A few of them usually spend part of each year in the mountains because of the never-ending heat in the coastal lowlands.

Jakarta and the smaller cities of Indonesia live chiefly by trade. Probably not more than one person in ten makes a living from manufacturing.

Changes, past and future. In the past there have been many changes in these islands. There will be many more in the future. Perhaps the outer provinces will catch up with Java in population and wealth. These provinces are now developing rapidly, not only in agriculture but also in the use of mineral wealth. The picture on this page shows men at work in an oil field in Borneo. The oil fields of Indonesia are among the richest in the world. Many of these oil fields are not yet developed. When they are developed, great changes will follow.

One of the greatest changes, of course, has

come with independence. During World War II, the Japanese occupied what was then Netherlands Indies. When the Dutch returned after the war, they found a well-organized movement for independence. For a time there was fighting between the Dutch forces and the native troops.

Finally, in 1949, the government of the Netherlands and the revolutionary government came to an agreement, and fighting ended. Under this agreement, a new and independent nation was recognized, the United States of Indonesia. All the territory of the Netherlands Indies, except western New Guinea, was transferred to the new nation. This nation was linked to the Netherlands in a kind of Netherlands-Indonesia Union. The two countries have agreed to cooperate in the Union in somewhat the same way that Britain and the Dominions cooperate in the Commonwealth. The Queen of the Netherlands is also recognized as Queen of Indonesia.

The future of western New Guinea is still uncertain. The Dutch want to keep it as a colony, but the Indonesians insist that it be added to Indonesia.

Helps in Learning

1. Why do some farmers move from Java to the outer provinces?
2. Name at least two advantages which help to explain why Java can support so many people.
3. Why might some of the other nations in Asia envy Indonesia, with its empty lands in the outer provinces?
4. Much rice is grown in several of the countries of Asia already described in this book. Name four of these countries. Is there heavy rainfall in the rice-growing areas of all four? Are all within the tropics? Are all these rice-growing lands thickly settled?
5. Even at the equator the weather may be cool in lands between 5000 and 10,000 feet above sea level. Are there such lands in Java (Fig. 117)? Do people of Jakarta have far to go to reach places where they can enjoy cool weather?

BELGIUM AND THE CONGO

Belgium

At the crossroads. Belgium lies at a great crossroads in western Europe. As Figure 6o shows, the lowland in Belgium is part of a great plain extending east and west across Europe. For centuries, this plain has been a great natural highway for trade and travel.

In a way, Belgium is also a crossroads for ocean traffic. It is directly between Britain and central Europe. The busiest ocean routes in the world meet in the North Sea, at or near Belgium's front door. Antwerp is one of the world's great ports (Fig. 6o).

The languages spoken in Belgium also suggest a crossroads location. The language of the northern half of the country is Flemish, a speech similar to Dutch. The people in southern Belgium speak French. Both languages are used in government. Laws are printed in both French and Flemish, just as in Canada laws are printed in English and French. The road signs also are in both languages.

Belgium has suffered greatly at times from its position at a crossroads. It has been fought in, and fought over, again and again. Indeed, it is sometimes called "The battlefield of Europe." At one time or another the land which now is Belgium has belonged to France, Austria, or the Netherlands. In both World Wars the armies of its powerful neighbors, Germany, France, and Britain, met on Belgian soil (p. 88). Many cities, towns and villages were damaged or destroyed.

In times of peace, Belgium has enjoyed many advantages from its crossroads location. There are no barriers to hold back trade. Raw materials and important markets are within easy reach in near-by countries. Belgium has made such good use of these advantages and others that it has come to be

"the workshop of Europe." More than half of its people make a living from manufacturing and trade.

In kinds of land and work, Belgium may be divided into three regions. One region is the wide, low plain between the coast and the valley of the Sambre and Meuse rivers (Fig. 164). A second region is an upland area, south of this valley. The third is the Sambre-Meuse Valley itself, a great industrial region. Often this valley is called simply "the Trough."

In the plain of Belgium. Men have chosen to live and work in different ways in different places in this plain. The coast, lined with sand dunes, is one of Europe's better known summer resorts. Many people who live all year along the coast divide their time between farming, fishing, and caring for tourists.

Low, almost flat land extends inland from the coast for miles. In some places there are wet pastures which look much like polders in the Netherlands. In other places, the land is plowed, carefully fertilized, and planted to crops. Some of the land is too swampy or sandy for either pasture or crops.

The best farm land in Belgium is in the southern part of the plain. There the land is not flat, but gently rolling. Almost every acre can be used for crops. This is also a "fruit country." Southwest of Brussels, for example, fine grapes are grown in hothouses and sent to early markets in Britain.

The ordinary farmer in the plain of Belgium has only two or three acres. He cares for this land almost as if it were a garden. Some part of his land is planted to grain—wheat, oats, rye, or barley. He also grows sugar beets, potatoes, or special root crops used as feed for livestock. In his barn he has perhaps one horse, two cows, a pig or two, and a little flock of chickens.

Root crops are particularly well suited to farming in a land so crowded as Belgium. They produce large yields on a small amount of land, and they demand a great deal of hand labor. The root crops grown in Belgium are of greater value than the grain raised there.

Flax and industry. The picture below is a scene in the plain of Belgium. A farmer is picking up a bundle of flax. Near him are many flax shocks. It took many hundreds of bundles of flax to make the big round stacks in the distance.

Flax is not a leading crop in Belgium as a whole. But in the part of the plain where the picture was taken thousands of acres are planted to flax. It grows well in the damp climate. Also, the farmers believe that the waters of the Lys River (Fig. 164) are particularly valuable for soaking flax. The bundles in the picture will be held down under the

water with rocks. Flax is soaked so the fibre can be separated from the rest of the plant.

Belgian industry got its start in the plain, many years ago. It began with the textile industry, based on home-grown wool and flax. At the time of Columbus, Bruges and Ghent (Fig. 164) were important manufacturing centres. It is claimed that at one time Ghent was five times the size of London.

Later, the industries of Belgium declined, on account of war and other troubles. Some of the skilful weavers and spinners moved to Britain. They helped that country develop its great textile industries.

During the last 100 years, Belgium has again become an important industrial nation. Now the iron and steel industry, based on coal, is the leader. The textile industry is a close second. Belgium has thousands of factories making textiles, particularly in the

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Figure 172. Fields of flax near a farm village



northern part of the plain, where the industry began. Ghent again is a busy manufacturing city. Textile factories are widely scattered in the plain in order to take advantage of the large labor supply in smaller cities and towns. Many factory workers are part-time farmers.

Belgium's textile industries now depend largely on imported materials, rather than on home-grown flax or wool. The local supplies would not be nearly enough. Cotton has come to be used widely. Of course, no cotton is grown in Belgium.

The upland. As Figure 60 shows, nearly all of Belgium south of the Trough is an upland. In places the land rises to more than 2000 feet above sea level. In this region, which was once a plateau, streams have cut many valleys, some wide, some narrow. At one time, nearly all the land was forested. Patches of forest remain, but most of the land has been cleared for farms. Since this region is higher than the plain, it has somewhat more rain, and is colder in winter.

The upland is by far the least thickly settled of the three regions in Belgium. It has no large cities (Fig. 60). The farmers grow grain and root crops, as in other parts of Belgium, but they have much more land in pasture, for sheep or cattle. Of course, farms are larger than those in the lowland.

The Trough. Between the upland and the plain is the so-called Trough of Belgium—a narrow river valley filled with industrial towns and cities. The Trough extends along the Sambre River from the French border to Namur, then on along the Meuse River toward the German border (Fig. 164). Liège is the leading city in the Trough. Most of the valley is so crowded that one can scarcely tell where one city ends and another begins.

The Trough is above all a region of mining and manufacturing. The country's greatest coal fields are there. Millions of tons of coal are mined each year. The picture above suggests a scene familiar wherever coal is mined in the Trough—great piles of waste, buildings



Figure 173. Where coal is mined

crowded closely together, noisy machines, coal cars, and men hard at work.

In the Trough, most manufacturing is of the heavy sort. Blast furnaces light the sky, night after night. There are steel mills, chemical plants, glass factories, locomotive works, and thousands of other factories turning out a wide variety of products. Tall smokestacks are in sight almost everywhere. This part of Belgium, more than any other, looks like "the workshop of Europe." Most of the products of these factories are exported to other European countries.

The coal fields help, of course, to explain this busy manufacturing region. The explanation is not as simple, however, as it might seem. Most of the coal in the Trough is not coking coal, the kind needed in making iron and steel. So Belgium exports millions of tons of ordinary coal, chiefly to France. Then much coking coal is imported, some



Figure 174. Market square and city hall © Gendreau

of it from Britain. In recent years, some coking coal has been dug from new mines in the Belgian lowland east of Antwerp. This has helped a little, but large imports of coking coal continue. Nearly all the iron ore which is used must also be imported. A large part of it comes from Lorraine, in France (p. 83).

Two-way trade. Few countries in the world depend as much on foreign markets as does Belgium. More of the products of some factories are sold abroad than at home. Of course, the trade is not one-way trade. It is two-way trade. Other countries sell Belgium not only coal and iron ore but also wheat, corn, wool, cotton, copper, machinery, and other things. The farmers cannot supply all the food needed in the country. Some of it is bought from the Netherlands. As we should expect, the larger part of Belgium's foreign trade is with close neighbors—the

Netherlands, Germany, France, and Britain.

Many things have helped to make this trade possible. Among them, four are outstanding. The first, we know, is coal. The second is Belgium's vast supply of skilled laborers, willing to work for rather low pay. The third is the crossroads location of Belgium. The fourth is good transportation. As Figures 60 and 164 show, Belgium has a great network of railroads and canals, connected with those of her neighbors. There are also many connecting highways.

Brussels—the capital. Brussels is the largest city in Belgium, a city with about a million people (Fig. 60). It is a beautiful city, sometimes compared with Paris. The picture shows part of a well-known square in Brussels. Flowers, fruits, and vegetables are for sale in the middle of the square. The fine old building, with the tall spire, is the city hall.

Only a few of Brussels' many people make a living directly from government work. The city has various light industries, and is a great trading centre. As Belgium is at the crossroads of western Europe, so Brussels is at the crossroads of Belgium. Railroads and highways reach out in almost every direction on the level plain. Many of these railroads are small lines which run along the roadsides. They are said to be "half tram and half train," meaning half streetcar and half train. Canals, too, carry goods to and from Brussels.

Antwerp—the chief port. When compared with London or New York, Antwerp is a small city, but with its suburbs it has almost 800 thousand people. Antwerp is an important manufacturing centre of Belgium and one of the leading ports, not only of Europe but also of the entire world. Goods move to and from Antwerp by canal, river, ocean, highway, and railroad.

Not all the freight moving through Antwerp is Belgian freight. Goods passing through the city may be on their way to or from almost any place in eastern France or western Germany.

Antwerp first became important as a port when the harbor at Bruges filled with silt. But Antwerp was more than 50 miles from the sea, on the Scheldt River (Fig. 164). The Dutch controlled the lower part of the river, and could thereby prevent ocean ships from reaching Antwerp. Later, ships were permitted to use the Scheldt freely. This helped Antwerp grow to its present importance.

Luxemburg. As Figure 60 shows, Luxemburg fills a little corner between France, Germany, and Belgium. It is independent, but is tied closely by treaty to Belgium. No taxes are paid on goods shipped back and forth between the two countries.

The Belgian Congo

Colony in Africa. Some of the ships which dock at Antwerp bring cargoes from the Belgian Congo, in Africa (Fig. 7 and p. 14). This is Belgium's only colony, a big, hot, thinly-settled land. To Belgium it must seem like a giant colony, for it is more than seventy times as large as the mother country. It is nearly a quarter the size of Canada.

The population of the Belgian Congo is more than 12 million. This is nearly three million more than the number of people in Belgium. Most of the Congo people are Negroes.

The Belgian Congo takes its name, of course, from the Congo River (Fig. 7), which drains almost every part of it. The colony is shut off from the sea on all sides, except for a narrow strip of land where the river tumbles down from the plateau on its way to the ocean (Fig. 7). The falls and rapids there helped to hold back exploration of the interior for centuries (p. 11).

Even today, most travel in the colony is slow and difficult. Some modern roads have been cut out of dense tropical forests. The streams, however, are the main highways. They are used by everything that floats, from canoes to big steamers. Some of the steamers burn wood. Others burn coal or oil. Each

year thousands of tons of fuel oil are pumped through a pipeline, from Matadi, near the coast, to Leopoldville, more than two hundred miles upstream, above the rapids (Fig. 7).

Air travel becomes more important, year by year, especially for government officials. A man now can get from Belgium to the Congo in days, instead of weeks.

Congo farmers. Most of the Congo people make a living from simple farming. For food, they grow manioc, rice, corn, bananas, yams, or other crops which do well in a land of much rain and constant heat. The oil palm yields both a food crop and a money crop.

In recent years, the export of cotton has become about as important as the export of oil-palm products. The picture on the next page shows cotton drying in front of a Congo home. The farmer is picking out sticks or leaves which were gathered with the cotton. This little pile may be his total crop, grown in a small clearing near the house.

Most Congo cotton is produced on large plantations, owned by Europeans. Nearly all these plantations are in the higher and less rainy lands near the eastern border of the colony (Figs. 7 and 30). In many places there, the forest is not dense, but "park-like," with scattered small trees. This makes it much easier to clear the ground. Also, both men and animals can work better there than in the hotter, rainier part of the Congo.

Minerals and Katanga. Except for agriculture, the biggest industry in the Belgian Congo is mining. This colony is a great storehouse of mineral wealth, including copper, diamonds, tin, and gold. Before World War II, the Congo supplied most of the world's uranium, now famous as a source of atomic power. The larger part of the diamonds mined in the Congo are "industrial diamonds," not the kind used in jewelry. Industrial diamonds are widely used for drills and cutting tools.

The Katanga district, near the southern border (Fig. 7), is the part of the colony that



Figure 175. Cotton farming on a small scale

is richest in minerals. Perhaps the largest copper resources of the world are in this region, partly in the Katanga district, and partly in Northern Rhodesia.

The picture on the next page shows the headquarters of a big copper mine near Elisabethville (Fig. 7). Many of the machines at the mine are run by electric power, produced at falls on a near-by branch of the Congo River. A great mine like this requires modern skill, much capital, and a vast amount of power. Figure 175 shows the simple work of a backward native farmer. It would be hard to imagine a greater contrast.

Mining throughout the Katanga district is on a big scale. This kind of mining requires thousands of workers, and large supplies of food. In this sparsely settled land, the mining companies could not get nearly enough laborers from villages near-by. They built their own "company villages," like the one in the distance in Figure 176. Then workers were

brought in from a wide area. Food, too, is brought long distances, even from British-owned lands to the south and east (Fig. 7).

The moving of native workers from their villages to mining districts has done much to change the life of the Congo. Families and tribes have been broken up. When the workers finally go back to their home villages, they are not so easily satisfied as before. They have seen other ways of living. They may want some of the things that they now know other people have.

To the coast. Three important travel routes lead from the Katanga district to the coast (Fig. 7). One is an all-rail route to Lobito, on the Atlantic coast. Another is a rail and river route across the Congo to Matadi. A third is a rail route to Beira, on the east coast. The route to Lobito is best. Shipping to Matadi requires too much loading and unloading. The route to Beira is too roundabout for European trade.

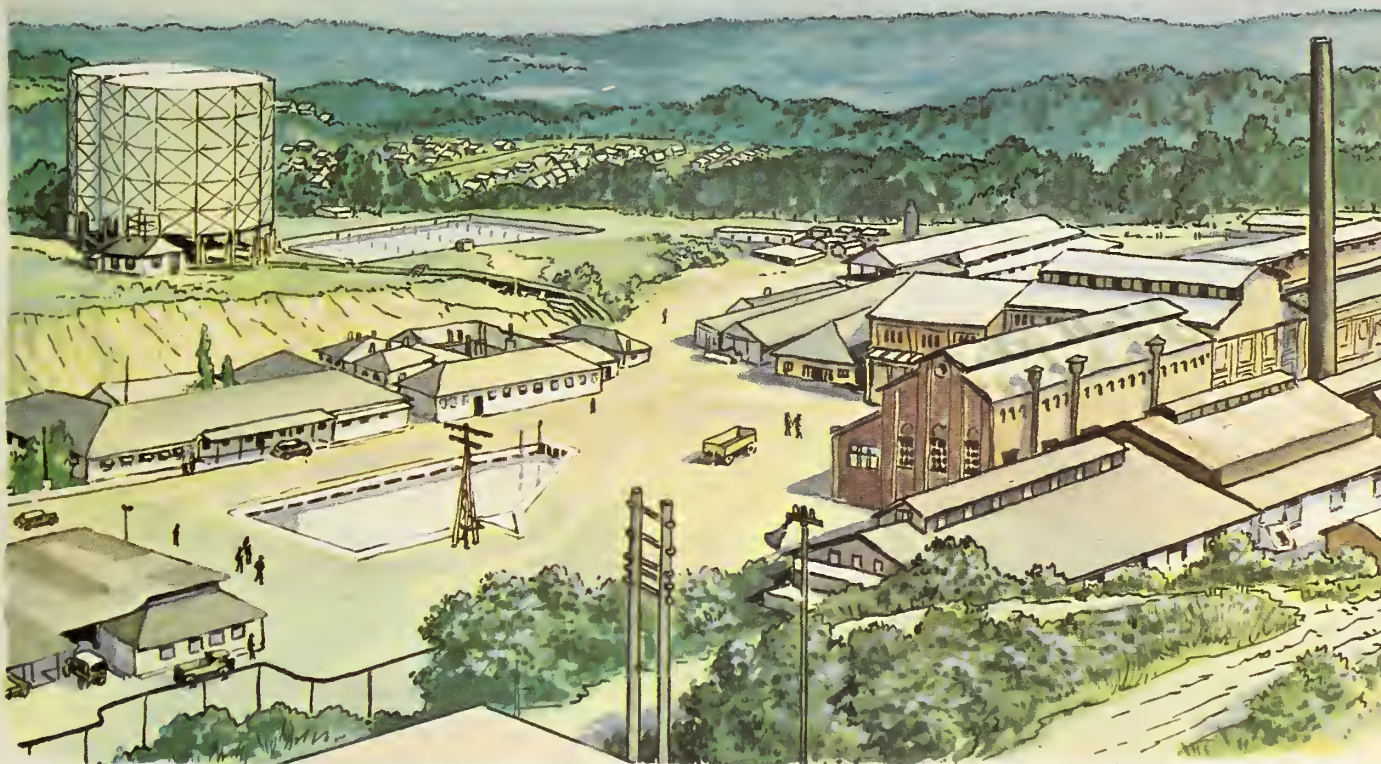


Figure 176. Copper mining on a big scale

Colony and homeland. It is hard to measure the importance of the Belgian Congo to Belgium. A few men are sent out to the colony as government officials. A few others go as engineers, or plant managers. Not many settlers have gone to the Congo, for most of the colony is not considered a good place for white people to live. Most of the white people now in the Congo live in the cooler, less rainy highlands.

So far, the greatest value of the Congo to Belgium has been in trade. As the colony develops, this trade will increase. Belgium sells to the Congo various manufactured goods, machinery, cotton cloth, and fuel. In return, Belgium buys valuable minerals, such as farm crops as cotton, and such tree crops as palm oil and palm kernel.

Helps in Learning

1. Use the map in Figure 60 in explaining why Belgium is at a great "crossroads."

2. Explain one advantage and one disadvantage in Belgium's crossroads location.

3. How are the three regions of Belgium alike, or unlike, in the kinds of work done? In the number of cities? In the use of waterways for transportation?

4. Why are root crops well suited to farming in Belgium?

5. Suppose a manufacturer in Namur, Belgium, wished to ship a heavy machine to London. What route might the shipment follow if it passed through Antwerp? What route could the shipment take that would avoid Antwerp? Which do you think is the better route? Why?

6. The development of the Katanga mining district has affected village life many miles away. Explain how, and why.

7. One travel route between Katanga and the seacoast is preferred to the others. Which route is it? Use the map of Africa (p. 8) in explaining why this route is preferred.

8. The next chapter describes Ethiopia, Liberia, and Libya, three other lands. What differences between them are shown by Figure 7?

OTHER LANDS IN AFRICA

Independent countries. In Africa, "the continent of colonies" (p. 11), there are four independent countries—Egypt, Liberia, Ethiopia, and Libya, in addition to the Union of South Africa which has chosen to remain within the British Commonwealth. Egypt is the northeastern corner of Africa, where that continent meets Asia. It is a bridge land. For that reason, the story of Egypt is included in a later chapter, called "Bridge Lands." The Union of South Africa was described in connection with "The British Commonwealth and Related Lands."

Ethiopia

Out-of-the-way. Ethiopia is one of the world's out-of-the-way countries. Even though it now includes Eritrea which is not far from the great ocean shipping route that passes through the Red Sea (Fig. 14), the connections of the country as a whole with the coast are not good. In time they may be developed.

Most of Ethiopia is a land of high plateaus (p. 14). Steep mountain walls stand guard on all sides. Here and there, a road or a caravan trail reaches from the lowlands up into the highlands. A single railroad connects the country with the outside world. This is the railroad which connects Djibouti, a seaport in French Somaliland, with Addis Ababa, highland capital of Ethiopia (Fig. 7).

As we learned earlier, Ethiopia remained independent in a continent of colonies, largely because it was an isolated land (p. 15). Unfortunately, this isolation has held back progress. The country has little foreign trade. Indeed, there is not much trade between one part of the country and another.

From warm lands to cool lands. The eastern border of Ethiopia dips down into the hot,

dry lowlands which lie between the plateaus and the sea. Nomads wander here and there in these desert lands, making a poor living from their goats, sheep, cattle, or camels.

The mountain slopes, below the edge of the plateaus, have much rainfall and, in many places, a thick forest cover. Coffee grows wild in the forest, and is the leading money crop.

The best part of Ethiopia is plateau land. Most of the people live on the plateaus, between 5000 feet and 10,000 feet above sea level (Fig. 7). Here the climate is temperate, never extremely hot or cold. Soils are good in most places.

The picture on the next page shows several farm villages on a plateau, southwest of Addis Ababa (Fig. 7). Around each village is a wall of poles and sticks, for protection. The farmers grow crops well suited to the temperate climate—wheat, oats, barley, peas, and corn. Much of the land is in pasture. Cattle pull the simple plows which the farmers use.

Addis Ababa and trade. Addis Ababa, the capital city, is near the middle of the country, where many people live. This is a good location for trade, and Addis Ababa has become the chief trading centre. Nevertheless, Addis Ababa's trade and its trading territory are rather small. Poor transportation shuts off the city from much of the country.

In many places, the plateaus are cut by deep canyons, hard to cross. A few roads have been built recently, but large areas have only rough trails. Most goods must be carried in oxcarts or on the backs of mules. In the rainy summer nearly all travel stops, except, of course, travel on the one railroad, between Addis Ababa and Djibouti.

Ordinarily, the leading exports of Ethiopia are hides and skins, coffee, and bees-

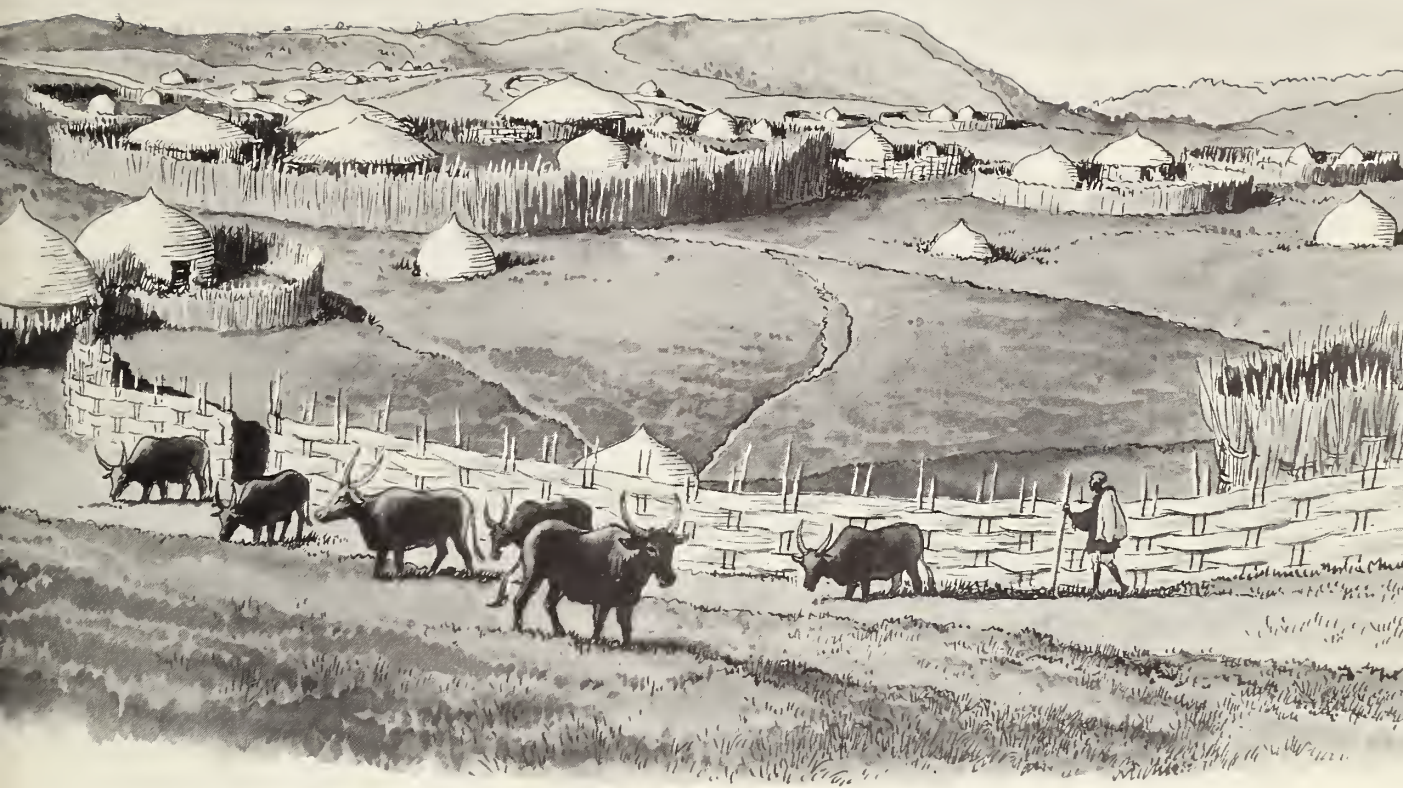


Figure 177. Ethiopian villages on a high plateau

wax. Men collect the beeswax from honeycomb made by wild bees.

Liberia

Negro republic. The story of Liberia begins about 125 years ago, when a group of American Negroes settled there (p. 14). Previously, they had been slaves. They became pioneers in the land from which their ancestors had been taken. Many of the settlers died, but more arrived from America. The colony survived, and became the independent republic of Liberia.

Today, Liberia has a population of about one and a half million Negroes. Most are native Africans. About one person in seventy-five is a descendant of the colonists who came from America. However, these "Americo-Liberians" largely control the government and most of the business. Most of the other Liberians live back in the forests, out of touch

with the world and knowing little about modern civilization.

In tropical forests. Dense tropical forests cover almost all of Liberia, from the seacoast to the rolling uplands far in the interior. Near the coast, many trees have been cut down to make room for towns and farms. The rest of the forest is almost untouched, except for scattered little clearings where the forest people grow their food.

Back in the forest, away from the sea, life has changed little in many years. The people live in simple grass-thatched huts, not much different from those shown on pages 47, 51, and 210. Here and there, men collect wild rubber or palm kernels, and trade them for cloth or tools. The common transportation routes are the streams or the narrow, winding trails which lead from village to village.

Along the coast. As we should expect, the coastal area in Liberia has been developed

more than the interior. Monrovia, the capital, is a regularly scheduled stop on a west African air line. Yet it is little more than an overgrown town. It has a population of only about 20,000 people.

In recent years, rubber has been the leading export of the country. Most of it is produced on a huge American-owned plantation near Monrovia. Thousands of people make a living caring for the millions of trees on the plantation. Figure 178 shows one of these workers tapping a rubber tree.

The development of the American rubber plantation illustrates both the progress that has been made and the progress that still needs to be made in Liberia. About half of the roads in the country are private roads on the plantation. There is no telephone service anywhere, except on this plantation. In general, the plantation workers have better health and medical care than most other people in the country.

Figure 178. An American plantation in Liberia



Libya

A new country. The land now known as Libya belonged to Turkey for several hundred years. Then about fifty years ago, it became a colony of Italy. Finally, in 1951, Libya became an independent country. The first king was a famous Arab leader.

A desert land. Libya is part of the great Sahara, described in connection with "France and Related Lands" (pp. 97-100). In the entire country there are only two small areas which receive more than ten inches of rainfall each year. These areas are on the Mediterranean coast. All the rest of the country gets less than ten inches.

Most of the land is used for grazing camels, sheep, and goats. The nomads who herd them must move from place to place in search of grass. Fortunately, there are also rich oases in Libya. There the farmers grow dates, oranges, olives, and various grains and vegetables.

Travel. The major centre of travel is Tripoli, the capital city on the Mediterranean coast. It is connected with neighboring countries by air and by sea. In the rest of Libya, caravan trails are the major routes of travel. Recently, buses, trucks, and automobiles have appeared on some routes, together with the camels.

Helps in Learning

1. Use the map in Figure 7 in explaining why Ethiopia is an "out-of-the-way" country.
2. Ethiopia and Liberia are in about the same latitude. However, the climate at Monrovia differs much from the climate at Addis Ababa. Tell how they differ, and why.
3. Tell why the use of land in Ethiopia depends much on altitude.
4. In what way is the Liberian forest a valuable resource? In what way is it a handicap?
5. What changes would there probably be in Addis Ababa if the city were well connected with the rest of the country by railroad?
6. Tell how Libya resembles the rest of the Sahara.



Figure 179. In Lisbon

PORTUGAL, SWITZERLAND, DENMARK

Three small countries of western Europe. The map of Western Europe, page 78, shows that Portugal, Switzerland, and Denmark differ greatly as to location. Portugal is in southwestern Europe, facing the Atlantic Ocean. It is a land of hills and valleys, lying between the ocean and the plateau which fills most of Spain. Switzerland is an inland, mountainous country. Denmark occupies a low peninsula and some islands in northern Europe, between the North Sea and the Baltic Sea.

All three countries are small. As Figure 60 shows, Portugal is much the largest of the three. Yet Portugal is a good deal smaller than Newfoundland.

Portugal

A street in Lisbon. The picture above shows a street in Lisbon, capital of Portugal. Lisbon is built on low hills overlooking the Tagus River (Fig. 60). Many of the streets in the city are steep, narrow, and crooked.

Here and there a hill is so steep that stairs are needed in the street. Only in the newer sections of the city are the streets wide and straight.

It is common to see stone houses, painted in bright colors. The weather is never very cold, so the people spend much time out-of-doors. On almost any day, in summer or in winter, housewives may stop to visit beside a fountain or in front of a market. Flowers grow in boxes outside the windows almost all year.

Lisbon, seaport and airport. The harbor at Lisbon is one of the best in Europe. Ocean ships can sail up the Tagus to the city, about nine miles from the open sea. At Lisbon the river is deep and ships are well protected from rough water. Along the water front there are big warehouses and modern machinery for loading and unloading cargo.

For hundreds of years, Lisbon has been the chief seaport of Portugal. In the days of European expansion, page 9, many Portuguese ships set sail from Lisbon. Months later they were in India, or in the East Indies, or in China. Today, many large steamships, as well as sailing vessels, move in and out of the Lisbon harbor.

Only a few of the big ships seen at Lisbon fly the Portuguese flag. Portugal is no longer a great sea power. Most Portuguese ships are small. They are used for fishing, or for trade along the coast, or for trips to the colonies in Africa.

The location of Portugal, at the southwestern tip of Europe, has helped to make it a great centre for travel by air between four continents. Air routes reach out from Lisbon like spokes from the centre of a wheel. One may fly directly from Lisbon to most of the important capitals in Europe. One also may fly directly to North America or to South America or to Africa. Most of the planes which fly in and out of Lisbon, like most of the big ships which use the Lisbon harbor, are not Portuguese.

Ships, cargoes, and resources. During the past 500 years Lisbon has seen great changes not only in ships but also in their cargoes. Sailing vessels, like those shown on page 7, brought spices and silks from the Orient. Today's steamers bring iron and steel, machinery, cotton, coal, or grain from northern Europe and from the Americas. When the steamers leave Lisbon, or other ports in the country, the chief cargoes are wine, fish, and cork. These are the leading three exports of Portugal.

As this trade may suggest, there is little manufacturing in Portugal. The country has some coal of good quality. There are deposits of copper, tin, and tungsten. These resources have been used little, partly because of poor transportation. Portugal has few good railroads or highways.

Farming in Portugal. On the whole, farming in Portugal is backward. Although most Portuguese are farmers, the country does not feed itself. Much grain must be imported. A large part of the land could produce better crops if the farmers had better tools, if they used more modern methods of farming, and if there were more roads and railroads. Much land, now in pasture, could be plowed and used for crops.

Many thousands of acres are planted to orchards, olive groves, or vineyards. From the grapes much wine is made. Nevertheless, most farmers depend on field crops and livestock for a living. Wheat, corn, and rye are important grain crops.

Although much of northern Portugal is a highland area and most of southern Portugal is a lowland (Fig. 60), most Portuguese farmers live in the northern part of the country. The rainfall map on page 76 helps to explain the difference in settlement. Northern Portugal has a much heavier rainfall than southern Portugal. This is a great advantage to farmers.

Cork from Portugal. In normal times, Portugal supplies about half the cork used



Figure 180. Cleaning and packing the catch

© Rapho-Guillumette

in the world. The country has forests in which there are millions of cork-oak trees. Cork is the outer bark of these trees.

The cork is removed from the trees in late summer. A man cuts into the bark of a cork-oak tree at two places, near the ground and just below the first branches. Then he strips off the outer bark between the cuts, taking care not to damage the inner bark. If the

inner bark is not harmed, the tree does not die. Ten years later, another crop of cork can be harvested from the same tree.

There is also a harvest of acorns in the oak forests. This harvest is gathered by hogs, which eat the acorns where they fall.

In a fishing village. The picture above was taken in a small fishing village on the coast of Portugal. Earlier in the day, men

from the village had brought in a big catch of fish. The women and girls now are cleaning the fish and packing them. They leave their household tasks to take care of the fish whenever the boats come in with a catch.

Some of the men in this village may be descendants of seamen who, centuries ago, sailed to India and China and the New World (p. 9). At that time Portugal's long seacoast had helped it become a seafaring nation. The long coast line is still an advantage. Thousands of Portuguese make a living by gathering or marketing the harvest of the sea.

Colonies in Africa. Portugal would be still poorer were it not for its colonies, particularly Angola and Mozambique in Africa (Fig. 7). Some Portuguese have moved to these colonies. Others, within Portugal, make a living from trade with the colonies. They are reminders of the time when Portuguese explorers led the way to the Orient (p. 9).

Figures 7 and 30 show striking differences between Angola and Mozambique. One colony is nearly twice the size of the other. Angola, on the west coast of Africa, is a plateau land. A large part of Mozambique, on the east coast, is lowland. Part of Angola is rainy, part is dry. Most of Mozambique has heavy rainfall.

In Angola. The chief resource of this thinly settled colony is farm land. The best farm land is on the plateau. Most of the farmers in Angola are Negroes who combine farming with herding cattle, goats, or sheep. Corn, wheat, cassava, and coffee are important crops. A farmer's only tools may be a hoe and an axe.

The Portuguese have opened up some plantations in Angola, hiring natives to do the hard work. Only a few Portuguese have settled there as farmers, to work side by side with the natives. Some people believe that,

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Figure 181. The beach at Lourenço Marques



sometime, more Portuguese farmers will settle in this colony, particularly along the railroad on the plateau (Fig. 7).

Although Angola is a Portuguese colony, it is important also to Belgium. A railroad which runs through Angola is the best route for exporting the products of the rich Katanga mining district in the Belgian Congo (p. 210). This railroad ends at the port of Lobito. Lobito has a fine natural harbor, one of the few good harbors along the Atlantic coast of Africa.

In Mozambique. The picture on page 218 shows a part of Lourenço Marques, near the southern end of Mozambique. This city is the capital of the colony, a popular winter resort, and an important seaport.

The picture shows the resort section of the city. Many of the visitors come from Johannesburg or Pretoria (Fig. 7). On the plateau in South Africa, winter weather usually is chilly. At sea level, in Lourenço Marques, winters are very mild and pleasant. Day after day one may bathe in the ocean or lie in the warm sun. The city is about as far south of the equator as Miami, Florida, is north of the equator.

Lourenço Marques is an important gateway for much of the northeastern part of the Union of South Africa (Fig. 7). A large part of the goods unloaded at Lourenço Marques is carried by rail to Johannesburg or to other cities on the plateau. Timber, mining machinery, and iron and steel move to these cities in the Union of South Africa. Mineral products move in the opposite direction.

The seaport of Beira is also a gateway for lands beyond Mozambique. Beira serves the Rhodesias, as well as part of the Belgian Congo (pp. 46 and 210).

Outside the towns and cities, most of Mozambique is a forest-covered lowland. The farm crops are those which we should expect in this climate—sugar cane, corn, rice, pineapples, cassava, and others. Some of them are grown on big plantations, some in small forest

clearings. Much land is not used by anyone. Perhaps in the future a better use will be made of the resources of Mozambique, Angola, and Portugal itself.

Helps in Learning

1. Tell how you think the harbor at Lisbon looked in the days of European expansion. Tell how it looks today.
2. Use Figure 5 in explaining why Portugal is well located for air travel.
3. What might be done to help Portuguese farmers make a better living?
4. On the map in Figure 117, find one Portuguese colony in the East Indies. Find three Portuguese colonies in Africa (Fig. 7). Then read again the story of Portuguese explorations (p. 9). How does this story help to explain the location of the Portuguese colonies?
5. Would you prefer to live in Angola or in Mozambique? Tell why. What part of the colony would you choose as your home?
6. During what months would you expect to find winter tourists in Lourenço Marques?
7. Why might people in Johannesburg prefer to ship goods to Lourenço Marques, instead of Cape Town?

Switzerland

An inland country. As Figure 60 shows, Switzerland is a small, mountainous, inland country. It is less than half the size of Portugal. Some of the mountains in Switzerland rise more than 10,000 feet above sea level.

In some ways it is a disadvantage for a country to be small, mountainous, and shut off from the sea. Yet Switzerland for years has been one of the most prosperous countries in Europe. The Swiss people have turned some disadvantages into advantages.

In beautiful mountains. Figure 182 was taken in the high mountains of Switzerland. This kind of scenery has attracted many thousands of tourists. Summers are delightfully cool in the mountain valleys. In winter, there is wonderful skiing on mountain slopes,



Figure 182. In the high mountains © Frederic Lewis

like the lower slopes in the picture. The two large buildings in the village are hotels for tourists.

Years ago the Swiss considered it a great disadvantage that more than a fourth of their country was barren mountain land, covered with ice and snow much or all of the time. The mountains now are the chief natural resource on which the tourist industry depends. The Swiss have advertised their mountains all over the world, inviting people to spend their vacations in Switzerland. This is one way in which the Swiss have tried to turn a disadvantage into an advantage.

Mountain farming. Many stories have been written about how Swiss farmers make a living. In the village in the picture, there are several farm homes. As the picture suggests, the village farmers grow a few crops on the floor of the valley. They cut hay on

the lower mountain slopes, where tourists go skiing in winter. During the summer, men and boys herd cattle in pastures still higher in the mountains. From time to time a farmer sells some cheese, or milk, or butter.

Many Swiss farmers live in valleys which are much wider and lower than the valley in the picture. The farmers in these valleys grow more field crops. Many have orchards or vineyards. Yet most of them, like the farmers in the high mountain valleys, make a living largely by selling dairy products.

Swiss farmers face many difficulties in their mountainous country. Most of the soils are not rich. Much land is too stony or too steep to be farmed easily. Winters are long and cold. Summers are short and cool. But there is plenty of rainfall, and the grass is good. So the farmers have turned to dairying. At home and abroad they find a good market for high quality dairy products. They are able to make a good living, even in a poor land.

In workshop and factory. One might expect to find little manufacturing in Switzerland. It has no important mineral resources either of coal, iron, or petroleum. There are high mountain barriers, both within and around the country. In spite of these difficulties, Switzerland is a land of factories. About half the workers in the country are factory workers. Only a fourth of the people make a living from farming.

Swiss industry began, years ago, in the homes of the people. During the long, cold winters, there was little outside work to do. The people took advantage of their spare time, and began to make simple things in their homes. The women made embroidery, the men carved things out of wood.

Later, factories were built—more and more of them. For a time, the parts of a clock, for example, might be made in scattered homes, then put together in a factory. There still is some household industry. Most manufacturing is done in modern plants, however, many of them in large cities.

Zurich, shown in the picture below, is the largest city in Switzerland. It is a very old city, but also a very modern industrial city. Electric power turns the wheels in hundreds of factories and lights the homes of many thousands of people in Zurich. The people of Zurich, like those almost everywhere in Switzerland, live within sight of snow-covered mountains.

Why Switzerland succeeded. Many things help to explain why Switzerland became an industrial country. There was a big supply of skilled workers. Many of them had developed their skills in household industries. The Swiss built railroads and dug tunnels to overcome the disadvantage of mountain barriers. They built hydro-electric plants beside mountain streams so that power from falling water could take the place of coal and petroleum. Switzerland took advantage of its location in Europe, Figure 60, by develop-

ing markets for its goods in near-by countries. Finally, the Swiss made things which were well suited to their land and their people. Some of the factories used dairy products. Most factories made goods which were light in weight, considering their value, and goods which required much skill in manufacturing. It is not surprising, then, to find that the leading factory products in Switzerland include milk chocolate, watches, cloth, fine machinery, jewelry, and musical instruments. Only a few pounds of steel are needed in making thousands of dollars' worth of watch springs, for example.

Helps in Learning

1. Sometimes it is said that Switzerland sells its mountains. What do you think this means?
2. Why is Bern well located as a capital?
3. Tell how farming in Switzerland is like

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Figure 183. Looking over Zurich

Courtesy Swiss Federal Railroads



farming in the Netherlands. How is it unlike farming there?

4. Would you expect Swiss factories to make steel rails? Microscopes? Cameras? Freight cars? Electric fans? Iron pipes? Tell why you decide as you do in each case.

5. Switzerland has some advantages which Portugal does not enjoy. What are they? Portugal has some advantages which Switzerland does not enjoy. What are they?

6. At what season of the year would you prefer to visit Switzerland? Why?

Denmark

Another small country. About 500 miles north of Switzerland is Denmark, another small country in Western Europe (Fig. 6o). Part of Denmark is a peninsula, reaching north from Germany. The remainder of Denmark is made up of islands, most of them lying between the Danish peninsula and Sweden. Copenhagen, the capital, is on the largest of these islands.

Denmark is a low land, with few natural resources. Unlike Switzerland, it has no mountains, and no hydro-electric power. Actually, there is scarcely a high hill anywhere in the country. Denmark has no coal, iron, petroleum, or other minerals of importance. In spite of all this, Denmark, like Switzerland, has become one of Europe's most prosperous countries.

Cows, pigs, and chickens. Denmark was not always prosperous. Less than a hundred years ago it was a poor country, and becoming poorer every year. At that time, the farmers depended for a living largely on growing and exporting wheat. At the same time, many thousands of acres of new land in the Americas were being settled, and planted to grain. Soon millions of bushels of grain flowed into world markets from the Americas at such low prices that the Danish farmers could not compete. They were almost ruined.

It is said that cows, pigs, and chickens saved Denmark. The Danish farmers turned

from growing wheat to raising dairy cows, pigs, and chickens. Before many years passed, millions of dollars' worth of butter, bacon, and eggs were exported. Fortunately, there was a good market for these products in growing industrial cities, especially those of Britain. Fortunately, too, the cool, damp climate of Denmark is better suited to dairying than to grain farming. The prosperity of Denmark still depends largely on cows, pigs, and chickens.

Modern farming. When Denmark was a wheat-exporting country, a few men owned nearly all the land. Their farms, of course, were huge. Today, the ordinary farm is small, perhaps 15 or 20 acres, and nearly every farmer owns the land which he works. Danish farmers are interested, therefore, in taking good care of their farms. Any extra profit goes to the farmers themselves.

Farmers in Denmark live on their farms, not in villages. The older farm homes have roofs thatched with straw which has turned dark brown from being exposed to the weather. Many of the newer houses have red tile roofs. Nearly all the homes, old or new, are comfortable and well-built. In most of them, there are radios, electric lights, books, magazines, and newspapers.

The people of Denmark are among the best educated people in Europe. This makes a great difference in farming. The farmers learned much about scientific agriculture when in school. They know how to choose the best seeds, how to improve soils, how best to care for livestock. Many farm people take special courses in agriculture after they have graduated from the ordinary schools.

Danish farmers have learned to rotate their crops. This helps in improving the soil and in growing better crops. One year a field may be in grass, the next year in grain, the following year in potatoes or beets, and then in grass again. The chief grain crops are oats and barley. Root crops are important as feed for cattle or hogs. Modern machinery



Figure 184. Where ships unload grain

© Ewing Galloway

and horses are commonly used for field work.

A careful record is kept of the amount of milk each cow produces, how fast each pig gains in weight, and how many eggs the chickens lay. With this information, a farmer can decide which cows, pigs, or chickens he should sell, and which ones he should keep. It is said that each year the farm animals in Denmark are of higher quality than the year before.

Feed from overseas. With modern methods of farming, the crops on Danish farms are large. Nevertheless, the country does not produce nearly as much feed as the animals require. Large amounts of grain and cottonseed cake are imported. Some of the grain comes from Canada.

The picture above shows a big elevator in a little port city on the Danish peninsula. In this elevator there is room for several shiploads of grain. Many steamers which bring grain to this port come from Argentina, in South America. In past years, Argentina has supplied Denmark with millions of bushels of corn and other grains. It was partly because of the settlement of Argentina

that Denmark turned from grain farming to raising cows, pigs, and chickens. Now Denmark finds it profitable to buy feed for them from Argentina.

Denmark is fortunate in its location, considering that it must import such bulky products as grain. By ocean steamer, grain can be brought from distant lands at low cost. Ships can unload the grain close to where it will be used. No part of Denmark is as much as 60 miles from the sea.

Cooperatives. Denmark is famous not only for its modern farms but also for the way the farmers work together. Throughout the country, groups of farmers have joined together, as they have in our country, in organizations called cooperatives. There are several kinds of such organizations. In a marketing cooperative, the members arrange for the organization to sell their products for them, as a group. In this way, each farmer may get more money than he could if he sold his products by himself. The members of a purchasing cooperative may buy their feed, fertilizer, or farm machinery together. In this case they get a lower price than they would



Figure 185. A cooperative dairy

© James Sawders

if each farmer made his own purchases. Usually, there is a saving in selling or buying in large quantities.

The picture above shows a cooperative dairy. Every day milk from the farms is delivered to the dairy. After the cream is separated, the skim milk is taken back to the farms and fed to the pigs or chickens. Each farmer is paid for the cream which he supplied to the cooperative. At the end of the year, the members divide what profits the organization has made. The egg-marketing cooperatives and the hog-slaughtering cooperatives are organized in similar ways.

The various marketing cooperatives carefully inspect all their products, making sure of good quality. A record is kept, showing where each pound of butter or bacon came from. Every egg is stamped to show the farm on which it was produced. A farmer may have to pay a fine if he sells an egg which is not good. When, therefore, a housewife

in Britain sees a box with the sign "Danish Butter," or "Danish Bacon," or "Danish Eggs," she is sure the product is good. This confidence has increased tremendously the sale of Danish farm products. Of course, it also has made money for the Danish farmers.

Copenhagen. The picture in Figure 186 was taken in Copenhagen, Denmark's capital and only large city (Fig. 6o). Almost one-fourth of the people in the country live in Copenhagen. A surprising number of them ride to and from work on bicycles. In Denmark, as in most European countries, an ordinary worker cannot afford an automobile.

Copenhagen is the chief port and the leading centre of trade and manufacturing in Denmark. Some of the people in the picture may be on their way to factories which make shoes, dishes, or furniture. Some may be on their way to shipyards alongside the harbor. Others probably are going to work in stores or offices in the downtown section of the city.

Copenhagen has a good location for trade. As Figure 6o shows, the city is almost at the entrance to the Baltic Sea. Many ships going into or out of the Baltic stop at Copenhagen. There, goods may be unloaded, rearranged if necessary, and carried on again without payment of tax.

Figure 6o also shows that the peninsula and islands of Denmark almost block the entrance to the Baltic Sea. North of Copenhagen, it is less than three miles from Danish soil to Swedish soil. It is easy to see, then, why Denmark is important to Sweden, Finland, Russia, Poland, and Germany.

Other Danish lands. The Faroes, a small group of islands north of Britain (Fig. 6o), are a part of Denmark. The island of Greenland, in North America, is a Danish colony. The only people in Greenland are a few thousand Eskimos and a few hundred Danes, all of whom live along the coast. Weather stations on the island help much in forecasting weather in the North Atlantic and in

Europe. Greenland's importance will increase as air travel in Arctic regions increases.

Helps in Learning

1. Tell in your own words the story of Denmark's change from one kind of farming to another. Be sure you explain *why* it changed.
2. How has education helped Danish farming?
3. Choose a story of farming in some country which is described in an earlier chapter of this book. How does farming in Denmark differ from farming in that country? How are they alike? What reasons can you give for the differences? For ways in which farming is alike in the two countries?
4. Explain how marketing cooperatives help Danish farmers.
5. In what country would you prefer to live for a year, Portugal, Switzerland, or Denmark? Why?
6. Which pictures in this chapter suggest places in our own country that you have seen or read about? Tell the class why you think the places are alike.

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Figure 186. A street in Copenhagen

© Screen Traveler, from Gendreau



SPAIN, ITALY, GREECE

Three Mediterranean lands. Spain, Italy, and Greece are called Mediterranean lands because all three face the Mediterranean Sea (Fig. 6o). The chief gateway cities are seaports rather than inland cities. Now, as in ancient times, the Mediterranean is a great connecting highway.

Greece was the first civilized land in Europe (p. 6). Later, civilization reached Italy, then Spain, and finally northern Europe. Today, Spain, Italy, and Greece are poor, and, in some ways, backward lands when compared with such countries as Britain, the Netherlands, and Denmark. Industry and trade have developed far more in northern Europe than along the Mediterranean.

There are many reasons for poverty and backwardness in these Mediterranean countries. In times past, some of the men who ruled there were more interested in conquering other lands than in developing their own. In the many wars that resulted, great numbers of people were killed, and much property was destroyed.

All three countries are poor in farm lands. As Figure 6o shows, much of their land is mountainous. They have no wide plains like those in northern Europe, in Russia, and in the Americas. Most farming is done on mountain slopes, in narrow valleys, or on small plains. In many places the soils are stony or poor.

In general, these Mediterranean lands are also poor in minerals. Modern industry depends much on coal and iron. These minerals are found in great abundance in northern Europe. They are not abundant in southern Europe. While there is some mining and manufacturing in Spain, Italy, and Greece, most of the people make a living from farming. In most places, it is a poor living.

Farming along the Mediterranean. Farming is somewhat alike in the three countries. One reason is that they have similar climates. Summers are hot and dry. Winters are mild and rainy.

The chief crops grown are well suited to this kind of climate. Much farm land is planted to grains, particularly wheat and barley. These crops are planted in the autumn. They grow during the mild, moist winter, and are harvested in late spring or early summer, before the summer drought can damage them.

Many farmers in Mediterranean lands are fruit farmers or vegetable farmers. The picture in Figure 187 shows part of a combination orchard and vineyard in southern Spain. Water for irrigation is brought from the Guadalquivir River (Fig. 6o). The barrels will be filled with wine after the grape harvest.

Grapes and olives have an unusual value to farmers in these lands because they can be grown, if necessary, without irrigation. Both olive trees and grapevines can stand the long, hot, dry summers. Of course, they will produce much more fruit if irrigated.

Cattle are the common work animals, but most farmers have few if any dairy cows. Now, as long ago, many people use olive oil as we use butter (p. 6).

The most numerous farm animals are sheep and goats. These animals can find pasture on land too steep or too rocky for cattle. Each summer many herds are driven into high mountains where there is more rain and more grass than in the lowlands. After the autumn rains come, there is good pasture on the lower slopes and in the valleys.

The following pages tell of life and work in Spain, Italy, and Greece. Of course, we should expect to find some differences in



Figure 187. In an irrigated valley

© Burton Holmes, from Ewing Galloway

these lands. Some people live in places especially favored by location or soil or climate. In general, however, farming in all three countries may be described by four words—grain, fruit, vegetables, and livestock.

Spain

A poor and troubled land. At one time, Spain was perhaps the wealthiest nation in Europe. The Spanish Empire included the Philippine Islands near the coast of Asia, and vast lands in the American continents (p. 10). Spanish ships brought gold, silver, sugar, spices, and many other riches to the home land. Later, Spain lost almost all of its empire. It is now a poor nation.

The Spanish people have suffered much from war. Spain did not take part in World War II, but from 1936 to 1939 it was a battlefield in a tragic civil war. Spaniards fought Spaniards to decide who should rule the country. It is believed that about a million persons were killed. Vast amounts of property were destroyed. It was years before the people in some places were able to rebuild their homes.

After the civil war was over, the Spanish people remained divided in their ideas about government. Some believe there will be more trouble in days ahead. Many of the people are poor and discouraged.

On the meseta. Spain is the only country in Europe which might well be called a pla-



Figure 188. In Madrid

© Silberstein, from Monkmeyer

teau land. As Figure 60 shows, the land rises steeply from the Atlantic coast and from the Mediterranean coast. Most of the interior is a wide, treeless plateau, called the *meseta*. Here and there, hills or low mountains rise above it. Madrid, the capital, is in the midst of the *meseta*.

As the population map shows (Fig. 66), the *meseta*, outside of Madrid, is thinly settled. There is water for irrigation in only a few places. During summer, the land bakes in the hot sun. A fine powdery dust is everywhere. Winter brings chilling winds, cold rains, and mud. Winters here are colder than in most Mediterranean lands. Occasionally there is ice skating in Madrid.

The farmers of the *meseta* live in widely scattered, drab-looking villages. The houses are the color of the earth, for most of them are made of adobe brick. In parts of the plateau, the farmers are able to grow olives and grapes. But most of the land is used either

for growing wheat or as pasture for sheep. There is so little rainfall that some farmers plant their fields only once in two years. In this way they use moisture from two seasons in growing one crop.

Along the coasts and the rivers. The coast lands are the most thickly settled parts of Spain (Fig. 66). The northern coast is a green land, all through the year. There is enough rain, winter and summer, so that irrigation is not needed (Fig. 58). Many fields are planted to corn. This area is more like northwestern Europe than it is like most Mediterranean lands.

The scene in Figure 187 resembles many others along the eastern and southern coasts of Spain. A belt of irrigated land stretches almost all the way along the coast from Barcelona to the Portuguese border (Fig. 60). There is also much irrigation along the Ebro and Guadalquivir rivers. Helped by irrigation, the farmers in these lands grow an abundance of oranges, lemons, olives, grapes, and other fruits. In normal times, fruits and wines are the chief exports of Spain.

Madrid and other cities. The picture on this page shows part of the main business street of Madrid, the Spanish capital. Madrid is surprisingly large. It has more than one and a half million people. Yet no navigable river flows through or near the city. No rich farm lands surround it. No valuable mines are near-by. Madrid has grown to its present size largely because it is the capital, and because it is located almost exactly in the centre of the country. Many routes of trade and travel meet at Madrid.

Barcelona also is a city of more than a million people. It is on the seacoast. It has a large supply of hydro-electric power from the Pyrenees Mountains (Fig. 60). Partly because of these great advantages, Barcelona is Spain's chief industrial city. Textiles are particularly important. There is plenty of home-grown wool, but nearly all the raw cotton must be imported.

Bilbao is in the centre of an industrial district on the Atlantic coast (Fig. 6o). Here, too, hydro-electric power is available. Iron ore and some other minerals are mined nearby. It is not surprising, then, that many metal products are made in the factories of Bilbao.

Thousands of small workshops are scattered through Spain, in cities, towns, and villages. The picture on this page shows one such workshop. The men are making tiles. Probably most of the things which Spanish people buy are made in small workshops.

Mines in Spain. For many hundreds of years Spain has been known for its minerals—iron, copper, lead, zinc, quicksilver, and others. Some mines have been worked for centuries. Yet less than 20 Spanish people out of a thousand now make a living from mining. Some of the best quality ores have been used up. In other lands, including our

own country, men have found vast, new mineral resources. Copper is one of them. Unfortunately for Spain, copper can be mined at less cost in Canada, the United States, and Chile, than in Spain. Most of the iron ore produced in Spain is shipped to Britain (p. 34), partly because Spain has no supply of coking coal. Spain remains a farming country and a poor country, although it is a land of many valuable minerals.

Spanish Africa and Spanish islands. Figure 7 shows that Spanish lands in Africa include Rio de Oro and the tiny colony of Ifni. Almost all of Rio de Oro is a desert waste. In 1957, Ifni and Rio de Oro revolted. Spain sent troops against the rebels, and fighting continued into 1958, when Spain changed the colonies into Spanish provinces and put them under military rule.

The Balearic Islands (Fig. 6o) and the Canary Islands (Fig. 7) also belong to Spain.

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Figure 189. A Spanish workshop

© Burton Holmes, from Ewing Galloway



In the Mediterranean, the French ferry-lines, page 93, and the British life line, page 15, are within short distances of the Balearics. The Canary Islands control the approach to Gibraltar from the southwest. For these reasons, if for no other, France and Britain are concerned over what happens in Spain.

Helps in Learning

1. Give as many reasons as you can for the fact that northern Europe has made more progress than southern Europe.
2. Many of the villages on the meseta in Spain are far apart. Why?
3. Barcelona is somewhat warmer than Madrid. How do you explain this?
4. Do you think Madrid is well located as a capital city? Why, or why not?

Italy

Shaped like a boot. A glance at the map in Figure 60 shows that the Italian peninsula is shaped like a boot. The border between Italy and Switzerland is at the top of the boot. Near the toe is the island of Sicily. Sometimes it is said that "Italy is kicking Sicily."

The backbone of the boot-shaped peninsula is a range of mountains called the Apennines (Fig. 60). On the population map, page 84, one can see the general shape of the Apennines, for the mountainous areas are settled rather thinly. Most of Italy's 47 million people are either in the valley of the Po River, or in narrow plains alongside the Apennines. Figure 60 shows dots for all Italian cities which have more than 100,000 people. None of these cities is in the mountains.

Rome, one of six great cities. Italy has six great cities, each with a population of more than 500,000 (Fig. 60). Naples, Palermo, and Genoa are leading seaports. Milan and Turin are important industrial centres, in the Po Valley. Rome, the capital, is by far

the most famous Italian city. Figure 190 shows part of Rome and a little of the Tiber River, which flows through the city.

About 2000 years ago, Rome probably was the chief city in all the world. It was the capital of the Roman Empire, which for a time reached from Spain to Iran. After the Roman Empire fell, the Italian peninsula was divided into small, separate countries. Rome lost much of its importance.

After more than 1000 years of division, the people of the peninsula were united in one country—Italy. This was less than 100 years ago. Rome was chosen as the capital of the new country.

There are both disadvantages and advantages in Rome's location. Rome is an inland city on the Tiber River. Modern ocean ships cannot reach it. The river is too shallow.

Through all its history, Rome has had one great advantage—its middle position in the peninsula. It was said in ancient times that "All roads lead to Rome." That might also be said today of all Italian roads. Railroads, highways, and airways reach out from the capital to all parts of the peninsula. Many of the people in Rome make a living, directly or indirectly, from the trade and the travellers that pass through the city.

Rome has many attractions for visitors. It is one of the world's great centres of art. Still standing are monuments which were built before the time of Christ. One may see parts of buildings which are more than 2000 years old. Within Rome is Vatican City, home of the Pope and headquarters of the Roman Catholic Church. The large dome in the picture on page 231 is part of St. Peter's Cathedral, in the Vatican.

Naples. About 120 miles southeast of Rome is Naples, another of Italy's "big six" cities (Fig. 60). It is the chief port for Rome and for much of the peninsula.

Naples is on the curving shore of a beautiful bay, the best natural harbor in all the country. This is a fine location for industries



Figure 190. Rome, on the banks of the Tiber

© Burton Holmes, from Ewing Galloway

using imported fuel and raw materials. The lowlands near Naples are crowded with farm people who supply food to the city, and buy manufactured goods in return. This great farm population is an important source of labor. It is not surprising, then, to learn that Naples is one of Italy's outstanding industrial cities. In or near the city are steel mills, textile mills, sugar refineries, and many other kinds of factories.

Mount Vesuvius. The most exciting view in the Naples area is a great volcano, Mount Vesuvius, shown in Figure 191. In the daytime, smoke may be seen rising from the top of the mountain. At night, the fires within the volcano light up the sky above it.

In some ways, Mount Vesuvius has been a hazard to the people who live near it. Many times a stream of hot lava has poured from the volcano, destroying homes and villages. Perhaps the greatest disaster occurred during the time of the Roman Empire, when thou-

sands of people were killed and entire villages were buried under lava or ashes. Pompeii was one of those villages.

In modern times, men dug through the lava and ashes to uncover Pompeii. It is now a great attraction for tourists. Visitors can walk along streets which were paved 2000 years ago. The ruts made by the wheels of Roman chariots are still there. In some homes, paintings actually remain on the walls.

In other ways, Mount Vesuvius has been of value to the region. It, too, is a tourist attraction. People may climb to the top of the volcano itself and look down into the fiery furnace. They also may look out over Naples and the crowded farm lands in the lowland. Mount Vesuvius has helped the land support so many people, for volcanic soils are among the best in the world.

In middle and southern Italy. The people of Rome and Naples are only a small part of the population of middle and southern Italy.



Figure 191. A famous volcano

© Gendreau

The lowlands are dotted with smaller cities, towns, and farm villages. The mountains, as we know, are not settled thickly.

The Apennines are not very high mountains. Few peaks reach more than 5000 feet above sea level (Fig. 60). Yet the mountains are high enough so that the climate there is much colder and rainier than in the lowlands. The Canadian soldiers who fought in the Apennines during the winter of 1944-45 know this well. They tell of sleet, and snow, and endless mud. Some people speak of "sunny Italy." These words scarcely apply to the Apennines.

Each summer, shepherds bring huge flocks of sheep and goats to graze on the rocky slopes of the mountains. Some flocks travel to and from the pastures on special roads owned by the government. In the more fertile valleys there are farm villages built of stone. Many hillsides are terraced, and

covered with vineyards, orchards, and tiny grain fields.

In the lowlands, as well as in the highlands, farming is much like that described earlier in this chapter (p. 226). As we have seen, this "grain-fruit-vegetable-livestock" kind of farming is common in much of Spain, Italy, and Greece. Of course, there are no orange or grapefruit trees in the higher and cooler mountain valleys of Italy. Such fruits are grown in abundance in the lowlands near the southern end of the peninsula, and in the island of Sicily. Here, too, many vegetables are grown during the mild winter, to be shipped to markets in northern Europe.

Figure 192 is a farm scene not far from Rome. There, as in most of Italy, farm tools are simple. A farmer may make his own plow or harrow. Farms are small. Many farmers have scarcely enough land to support themselves and their families.

Palermo, another of the "big six" cities, is the chief trade centre and the leading port of northwestern Sicily. From it, oranges, lemons, and other fruits and vegetables grown on the island are shipped to northern markets.

In northern Italy. The wide top of the Italian boot is northern Italy. Roughly, it is the area north of a line drawn directly east across the peninsula from Genoa (Fig. 60). This is said to be "another Italy," because it differs in several ways from middle and southern Italy.

The weather is different. As Figure 60 shows, northern Italy extends into the continent of Europe. The weather of northern Italy is "continental," too. It is more like the weather of middle Europe than that of Mediterranean lands. Winters are cold. Rain falls in summer as well as in winter.

Farming is different. On the wide plains of the Po, farmers use more and better machinery than elsewhere in Italy. Corn is an important crop, partly because of the summer rains. In places, much rice is grown. Other field crops are wheat, sugar beets, and hemp.

Many farmers in northern Italy grow mulberry trees. Women and children feed the leaves to silkworms. At times, silk has been one of Italy's chief exports.

The Alps extend into Italy (Fig. 60). The cities and farm villages on their southern slopes suggest the cities and villages of the Swiss Alps (p. 220). In both sections of the Alps, there is much dairying. In both, caring for tourists is an important business.

Italy is poor in minerals. It has little or no iron ore. Millions of tons of coal must be imported each year. Nevertheless, there has been a considerable development of industry in northern Italy. There is a great amount of water power, especially in the Alps. In 1949, new finds of oil and gas were made in the Po Valley. There is an abundant supply of labor in the thickly settled plain. With these great advantages, northern Italy probably will continue to be the chief industrial



Figure 192. Before the grain is planted © Black Star

region of Mediterranean lands. If all Italy were like northern Italy, the country would not be, as a whole, poor and backward.

Milan and Turin. Milan is the leading industrial centre of northern Italy. Many people work in its factories, for example its textile mills, making cloth of cotton, wool, or silk. Others make a living from the vast amount of trade which flows through the city. Milan is the greatest railroad centre in the Po Valley (Fig. 60). A branch of the Po River is near Milan, but it makes little difference to the city. The Po is not navigable for large boats.

Turin, another of the "big six" cities, is near the western border of the plains of the Po (Fig. 60). Like Milan, Turin is a

city of industry. Both cities have depended much on hydro-electric power, produced in the Alps near-by. The main railroad line connecting France and the Po Valley passes through Turin.

Facing east or west. As Figure 60 clearly shows, the Po Valley faces east, toward the Adriatic Sea. Hundreds of years ago, most of its trade moved in that direction. Venice, near the mouth of the Po, was the leading port. It depended much on trade with the eastern Mediterranean and the Orient.

Now northern Italy turns its back to the Adriatic. Trade moves in new directions. The chief foreign markets and the chief sources of imports are in middle Europe, in Britain, or in the American continents. Good railroads reach north from the Po Valley, through mountain tunnels and over mountain passes, to middle Europe. Genoa, beyond the mountains on the *western* coast, has become the chief port. Fortunately, the Apennines are narrow near Genoa, and the mountain passes are little more than 1500 feet above sea level.

The tourist business has helped to keep Venice alive. Most people come to see the canals that serve as streets. For protection, Venice was built on small islands and over shallow water. Many homes and shops can be reached only by boat.

Italy and colonies. When Africa became a "continent of colonies," Italy got little valuable territory (pp. 13-14). This was partly because Italy was then a weak, new nation.

At the time of World War I, the chief Italian colonies were Italian Somaliland, Eritrea, and Libya (Fig. 7). All these are desert lands of small importance. They have few people or resources. Libya once controlled a trade route which followed the northern coast of Africa. This route, however, is no longer much used. Some Italians settled in Libya, but only a few could make a living in so poor a land.

In 1935, under the leadership of Mussolini,

Italy set out to get richer lands by force. Ethiopia was soon conquered (pp. 14-15).

In World War II, Italy joined Germany, expecting Hitler to win. But when the war was over, Ethiopia had regained its freedom and Italy had lost all of its colonies. On Christmas Eve, 1951, Libya became an independent Arab Kingdom, though much too poor to support itself. Somaliland, also very poor, has been promised freedom later. Eritrea has been joined to Ethiopia.

Taken from Italy after the war, Trieste and its surrounding area were returned to Italy in 1954, while a small neighboring area inhabited by Slavs went to Yugoslavia.

The years ahead. Almost certainly, Italy faces difficult times in the years ahead. The country suffered much from World War II—in loss of life, money, property, markets, and territory. Italy is only about half the size of Manitoba, an area too small for 47 million people. This is especially true because Italy is poor in farm land and minerals.

During the last 50 years, millions of Italians have moved to other lands in order to make a better living. Many came to Canada and the United States and to Argentina. Now, however, few countries are willing to admit many new settlers. It seems probable, then, that Italy will remain, for years to come, a poor nation in many ways. No country can easily solve such grave problems as now face Italy.

Helps in Learning

1. Name the six largest cities in Italy. Tell where each of these cities is located, and give at least one advantage in each location.
2. Tell of three places you would like to visit in Italy. Why did you choose these three?
3. The first part of this chapter describes in general the kind of farming and the kind of climate found in Mediterranean lands. Tell of two places in Italy which those descriptions do not fit. Give reasons for the differences.
4. In recent times, much swamp land in Italy



Figure 193. A small harbor on an island in Greece

has been drained and planted to crops. Why is this of great importance to the country?

Greece

Peninsulas and islands. The first chapter in this book told how civilization first reached Greece, a country of many peninsulas and many islands (p. 6; Fig. 6o). The Greek islands were stepping-stones between the continents. There were many natural harbors both in the islands and along the irregular coast of the mainland.

The picture above is a modern scene on one of the Greek islands. Men are loading a small ship with pottery. Perhaps they will

sail to a port near Athens (Fig. 6o). Though they sail a hundred miles, they may never be out of sight of land. The Aegean Sea is dotted with thousands of islands, most of them too small to be shown on an ordinary map. Now, as long ago, the countless islands and the many natural harbors of Greece encourage the people to travel by sea. For many of them, there is no other way to travel.

The islands of the Aegean Sea are of great importance to Russia as well as to Greece, though for a different reason. As one can see by a glance at the map in Figure 6o, these islands guard the only waterway which leads to and from southern Russia. Control of these islands means control of the routes



Figure 194. Fruit for sale

© Three Lions

from the Mediterranean to the Dardanelles.

In the mountainous mainland. Although Greece always has been known as a sea-faring nation, most of the Greek people are farmers who live in the mountains on the mainland. Flocks of goats and sheep find pasture on the mountain slopes. The best farms are in the lowlands. In some places much tobacco is grown. In general, however, farming is described by the four words already used (p. 227)—grain, fruit, vegetables, and livestock.

Greece is not nearly so thickly settled as Italy (Fig. 66). Yet Greece does not grow enough food to feed itself. Few farmers have modern tools. It is difficult to get crops to market. For lack of care, the soil in most places gets poorer and poorer.

At one time, forests covered much of Greece. Now most of the trees have disappeared. Time and again, fires have swept over the mountains. People have cut down

many trees, and have failed to plant new seedlings. Sheep and goats have eaten millions of young trees. The loss of the forests is a loss to all Greece. Much lumber must be imported. Without trees, the soil is washed more quickly from the hillsides.

Trade in village and city. In Greece, as in every country, there is trade. Not all of it is in the shops and market places. The picture on this page shows a travelling trader who has stopped in front of a village home. He is weighing the pears which he has sold to the housewife. The trader's entire stock is on his pack-animal.

In ancient Greece, Athens was the outstanding city. So it is in modern Greece. Athens is the capital, the largest city in the country, and the chief trading centre. Upon a hill, overlooking Athens, there are fine buildings, constructed by the people of ancient times. Below the hill one might see flour mills, cigarette factories, warehouses, and railroad shops.

Rebuilding Greece. World War II brought disaster to Greece. German armies conquered the country, and held it until the end of the war. When freedom came again, Greece was hungry. Roads and railroads had been badly damaged. Many homes had been destroyed. Many farm animals had been killed. After the war, agriculture and transportation improved somewhat. But there was conflict in Greece between the government and Communists who tried to seize control of the country. Our own country helped the government with money and supplies until the Communists were defeated.

Helps in Learning

1. Use Figure 5 and Figure 60 in explaining why Russia is interested in the islands in the Aegean Sea.
2. Tell at least one way in which government has affected the life of the people in Spain. In Italy. In Greece.

NORWAY AND SWEDEN

In a northern peninsula. Europe may be thought of as a great peninsula, one of several which reach out from the vast continent of Eurasia. In turn, Europe itself has many peninsulas. Three of them border the Mediterranean. Far to the north is another, the Scandinavian Peninsula, occupied by Norway and Sweden (Fig. 6o). As we should expect, life in these northern lands differs much from life in Mediterranean lands.

The Scandinavian Peninsula is large, more than twice the size of the British Isles. Yet more than five times as many people live in the British Isles as in Norway and Sweden together. As Figure 66 shows, most of the Scandinavian Peninsula is thinly settled.

Norway and Sweden are said to "turn their backs to each other." That is because the boundary line between them follows high mountains most of the way (Fig. 6o). Norway faces the Atlantic Ocean. Sweden faces the Baltic Sea. In early times, Norwegians sailed to the west. They reached North America. The Swedes sailed eastward across the Baltic. For many years they traded along the rivers of what is now western Russia.

Differences. The mountains of the peninsula cause important differences between Norway and Sweden. As Figure 6o shows, Norway is almost entirely a country of highlands. Sweden has a wide lowland area.

There is also a difference in weather. A warm ocean current moves northeast from the Gulf of Mexico across the Atlantic Ocean. Near northwestern Europe this warm current is called the North Atlantic Drift. In northwestern Europe the winds usually blow from the west, off the ocean. Partly because of this warm current and these winds, winter weather is mild along the coast of Norway. The harbors never freeze over. Sweden, how-

ever, is shut off by the mountains from the westerly winds, and the warm current does not enter the Baltic Sea. In winter, therefore, weather in Sweden as a whole is much colder than weather in Norway. Many of Sweden's harbors are filled with ice each winter.

The Scandinavians. The people of the Scandinavian Peninsula are, of course, Scandinavians. The Danes, too, are counted as Scandinavians, although they live on another peninsula (Fig. 6o).

These three groups of people have much in common. The languages are very similar. At various times in the past the three countries have been united in one way or another. For nearly a hundred years before 1905, Norway and Sweden had the same king. In 1905, the countries separated peaceably.

Norway

A prosperous people in a poor land. In usable land, Norway is one of the poorest countries in Europe. On more than half of its area, nothing will grow at all—no trees, no grass, no crops of any kind.

The Norwegians have been able to make a good living, however, even in such a poor land. They have done it by using carefully the land on which something will grow, and by turning to other resources. Less than a third of the Norwegians are farmers. Most of the people depend on fishing, trade, transportation, or manufacturing for a living. The following paragraphs tell of these and other kinds of work—along the Atlantic coast, in the highlands, and in southeastern Norway.

Along the Atlantic coast. The city shown in the picture on the next page is Alesund, on the Atlantic coast, about 150 miles north of Bergen (Fig. 6o). Alesund, about as far



north as Whitehorse in the Yukon, is built around a harbor, as the picture shows. All through the year ships come and go, past the lighthouse at the harbor entrance. At all seasons men load or unload cargoes along the water front, for the harbor never freezes.

The people of Alesund see many kinds of ships in the harbor—mail boats, freight boats, fishing boats, perhaps tourist ships on their way to North Cape (Fig. 6o) and the “land of the midnight sun.” Most of the craft that use the harbor are fishing boats. Several are tied up at the wharf at the right of the picture. Alesund is said to have more fishing boats than any other Norwegian port.

Through the years, fishing has been a leading business all along the Norway coast. There are millions of fish in the water. Fishermen can work all year, since the harbors never freeze. As they sail along the coast they are somewhat protected by thousands of offshore islands which guard the coast. One of these is shown in the background of the picture. Alesund itself is on an island.

Farm land is scarce along this coast. Most of it is found in little patches beside the fiords, which reach far into the land. Dairying is important to many of the farmers. Common crops are hay, oats, barley, potatoes, and the like. In this cool and rainy land, both hay and grain must be dried on racks to prevent spoiling.

The poverty of the land has encouraged fishing. Fields are tiny. In many places, soils are thin and poor. Summers are cool and rainy. It seems natural, then, that many people should turn to the sea for a living, especially since the conditions for fishing are favorable.

The sea is the main highway for trade and travel along Norway's ragged Atlantic coast. Since Alesund is on an island, all its trade moves by sea. The warehouses at the water front in the picture may contain coal, oil, hardware, ropes, netting, or waterproof clothing. Some of these goods will be carried

by boat to farm villages in a near-by fiord.

In many ways, the region around Alesund is like the rest of the Atlantic coast of Norway. However, there is less and less farming as one goes farther north. In Bergen, south of Alesund (Fig. 6o), there is some important manufacturing, ship repairing, and the like. But all along the coast the people have prospered by using the resources of the sea as well as those of the land.

A sea-faring nation. This story of life along the Atlantic coast helps to explain why Norway is today one of the great seafaring nations in the world. Norway has so many ships, it is said, that all the people in the country could go to sea at once. There are far more boats than automobiles in Norway.

Many Norwegian ships seldom stop in any Norwegian port. They are used in distant parts of the world, carrying cargoes for other nations. For example, Norwegian ships sail regularly across the Pacific Ocean—between west coast ports of the United States and Canada and ports in Japan, China, the Philippines, and Singapore. Before World War II, only three countries in the world had a larger fleet of cargo ships than Norway.

Norwegians of long ago sailed back and forth along all the coast of Europe. Without chart or compass they sailed far to the west and settled Iceland (Fig. 6o). Hundreds of years before Columbus, they reached the continent of North America.

The keel. The interior highlands of Norway are called the Kjölen Mountains (Fig. 6o). To the Norwegians, Kjölen means “the keel.” The mountains are supposed to remind them of the smooth bottom side of a boat, upturned on a beach. This is a good description, for most of the highland area is a smoothly rounded, rocky plateau. Thousands of years ago a great sheet of ice scraped off almost all the soil, and left vast fields of barren rock. Today the largest glaciers in Europe are on the keel.

Naturally the keel has little value to man.

Animals find a little summer pasture here and there along the edge of the plateau. In the north, the keel is the home of a few tribes of nomad Lapps. Their reindeer can live on moss which in places covers the rocky land. Even in winter the reindeer can dig down through the snow and get enough to eat. But on the whole the keel is a great waste land. It is almost without people, for it is almost without resources which man can use.

Southeastern Norway. More than half of the people of Norway live in a comparatively small area in the southeastern part of the country, east and south of the keel (Fig. 6o). This area includes the capital city of Oslo, the lowland north of the city, and the lowland fringe along the coast southwest of the city.

In almost every way, except fishing, southeastern Norway is the heart of the country. It has the best land in Norway. The finest forests are there. Most of the industrial plants are in that region.

Even the weather in southeastern Norway differs from that in the rest of the country. The keel shuts off this area from some of the storms that beat against the western coast. The lowland north of Oslo, for example, is sunnier and far less rainy than lands near Bergen. In this lowland near Oslo, farmers can grow wheat, which does not do well on the opposite side of the mountains. Grain and hay dry more easily. In southeastern Norway there is room for much larger farms than in most other parts of the country.

Using the forests. Almost one-fourth of Norway is covered with trees. Most of them are in the southeastern region, although scattered patches of forest are found along the Atlantic coast north and south of Bergen. Most of northern Norway is too cold for trees to grow, and there are, of course, none on top of the keel.

The forests, wherever they are, have served the Norwegians well, through many years. Wood has always been good building material and fuel for the home. For a long time wood

was the only material out of which boats could be made. In places, people used wood as fuel for evaporating sea water. This was done to get the salt needed to preserve fish.

In recent times, pulp and paper industries, based on the forests, have employed thousands of people. The largest single export from Norway, as from Canada, is paper and its products. Even the export of fish is second to it.

Industrial Norway. Almost as many Norwegians work in factories as on farms or in the forests. This may seem strange since Norway has no important wealth in coal or oil. However, Norway has put the rivers to work in producing electric power for industry. In addition to paper and paper products and fish, Norway exports chemical fertilizers and aluminum. Both are made largely by hydroelectric power, at scattered places in southeastern Norway.

Norway's leading import is ships. Other important imports are machinery, coal, petroleum, and grain.

The capital city of Oslo is the greatest single centre of population, manufacturing, and trade in the country. In this busy and beautiful city there is little to suggest that Norway is a poor land. Norway has become a prosperous country by careful use of the land, and by developing resources in fish, forests, and water power.

Sweden

A living from four resources. Most of the people in Sweden make a living directly or indirectly from four great natural resources. Three of these are suggested by the next three pictures. They are resources in minerals, forests, and farm lands. The fourth is water power.

Fishing is much less important in Sweden than in Norway. There has been less poverty in land to drive people to the sea. Moreover, fishing in the Baltic Sea is not nearly so good as in the Atlantic Ocean.



Figure 196. An ore train bringing its load to an ore ship

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Mining in Sweden. The picture above was taken in the far north of Sweden. It shows part of the river harbor of Lulea (Fig. 60). An electric locomotive has brought a train load of iron ore to be unloaded into the waiting ship. The railroad trestle was built high so that the ore could easily be dumped into the vessel.

Sweden has two outstanding mining districts. In both, iron ore is more important than any other mineral. One district is in southern Sweden, not far from Stockholm (Fig. 60). The other is northwest of Lulea, in cold and barren Lapland. Nearly all the ore mined in this district is exported.

Figure 196 is a summer picture, for this harbor is locked by ice in winter. Then ore from Swedish Lapland moves to the Norwegian port of Narvik, on the Atlantic coast (Fig. 60). Narvik is always ice-free, though it is even farther north than Lulea. As we know (p. 237), the entire Atlantic coast of Norway is warmed by the North Atlantic Drift. But every winter all of the harbors on the east coast of Sweden are filled with ice.

There are advantages for mining in Lapland. A vast supply of ore is found near the surface. Huge shovels can scoop it up by the ton, and drop it into waiting railroad cars. The ore is exceptionally rich. Near-by streams



Figure 197. A common scene in northern Sweden

are used to furnish hydro-electric power for operating the mining machinery and the railroad.

Mining in Lapland also has its difficulties. All of the Lapland mining district is north of the Arctic Circle. Almost all food and other supplies must be brought from hundreds of miles away. Men tire of the long, dark winter, when for weeks the sun never rises.

In a great forest. In forest resources Sweden, like Canada, is one of the richest countries in the world. About half of all the land is covered with trees. One great forest of spruce and pine reaches almost continuously from the Dal River (Fig. 6o) to the northern border. Most of southern Sweden was also once covered with forests, but many trees have been cut away to make room for farms.

The picture above shows men at work in the great northern forest. They are part-time

farmers, part-time forest workers. In summer, they care for their livestock and their little fields of grain or root crops. In winter, they work as loggers in the forest. They bring their own horses. Trucks or tractors are used in only a few places.

The thick blanket of snow makes it easy for the horses to drag the logs to near-by frozen streams. There the logs lie until spring. When the ice and snow melt, millions of logs move downstream toward the coast.

A sawmill or a pulp mill has been built at the mouth of almost every river along the coast between the Dal River and the northern boundary of Sweden. In summer, ocean ships can come almost to the doors of a large number of these mills. Many of the mills use hydro-electric power.

Once, nearly all the logs were used for lumber. Now, in Sweden as in Norway, many

of them are made into wood pulp or paper. About half the value of Sweden's exports is in forest products. Matches, cardboard, paper, and lumber are only a few samples.

Although much timber is cut in Sweden each year, the supply remains about the same. Just as in our own country, the government tries to prevent waste in the forests, and encourages the planting of trees. In places there are cultivated forests where trees are planted, and "harvested" as crops. With careful planning, this great resource can renew itself forever. Always there are growing trees to take the place of those that are cut.

Farming in Sweden. The picture below is a farm scene between Stockholm and Göteborg (Fig. 60). It suggests what much of southern Sweden is like. Most of this part of Sweden is a lowland, dotted with farms and little villages. Almost everywhere trees may be seen in the distance. Nearly all farmhouses are red, trimmed with white. The barns are red, too.

A village like the one in the distance in the picture may have only a dozen homes, a store,

a church, and a school. As in our own country, most farmers live on their farms instead of in villages. Electricity is used for light and power on many Swedish farms. Some of it comes from hydro-electric plants.

The hay in the picture was piled in small stacks so that it would dry without spoiling. At the right, a Swedish farmer is harvesting oats with a grain binder. Within a few hours the bundles will be hung on racks to dry. Modern farm machinery, pulled by horses, is common in southern Sweden.

More land is planted to hay and oats than to any other two crops. As in other countries in northern Europe, the farmers also grow such crops as wheat, barley, and sugar beets. Once, grain was of first importance to Swedish farmers. Now, more and more of these people depend on dairying. Britain buys butter from Sweden as well as from Denmark.

As we should expect, farming in southern Sweden and in Denmark is much alike. As Figure 60 shows, both areas are lowland, and both are in about the same latitude. In both countries people are proud of their scientific

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Figure 198. A common scene in southern Sweden





Figure 199. In the capital of Sweden

© James Sawders

farming. Seeds, for example, are most carefully selected. In the schools, children are taught the best farming methods. Of course, farming in southern Sweden is also much like that in southeastern Norway.

Manufacturing in Sweden. Only about half of the people in Sweden work in mines or forests, on farms, or in hydro-electric plants. Yet almost every person in the country depends on these four great resources, whether he drives a bus, sells shoes, repairs watches, or works in a factory. Hundreds of factories of various kinds are scattered across southern Sweden—factories preparing food, or making clothing or leather or glass. All have the

advantages of good transportation (Fig. 60). Nearly all of them use hydro-electric power.

Factories making machinery and metal goods are especially important. Most of these are between Stockholm and Göteborg, in Sweden's iron and steel district. Here, there are plenty of workers and abundant supplies of fine quality iron ore.

In Sweden there is very little coal. Much coal is imported, although men in the iron and steel industry have come to use much charcoal in place of coal. Using charcoal, made from wood, is more expensive, but charcoal is particularly useful in making a high quality steel. Little by little Sweden has come

to specialize in making fine machinery and metal goods. The list of such things is very long—watch springs, ball bearings, surgical instruments, gas stoves, cream separators, bicycles, and many other products.

Stockholm. Sweden's capital and largest city is Stockholm. This is one of the most beautiful cities in the world. It has been given many names which suggest beauty—names such as "Venice of the North" and "Queen of the Baltic." Hundreds of years ago, the city was founded on three small islands, where the waters of a large lake join the Baltic Sea (Fig. 6o). As the city grew, it spread to the mainland and to other islands. In summer, the waterways are filled with traffic—ferry boats, launches, rowboats, and big steamers. In winter, there is good skating on most of the waterways. The main harbor is kept open for ships by means of ice breakers.

The picture on the opposite page shows Market Square, on the main business street. Stockholm, as we can see, is a modern city. Several of the names on the big buildings would be familiar to Canadians. Many kinds of fruit, vegetables, and other things are sold in the market in the foreground of the picture. Elsewhere in the city there are parks, museums, factories, and, of course, the homes of the many people who live in Stockholm.

Göteborg. Stockholm and Göteborg are Sweden's two leading ports. Göteborg is across the peninsula from Stockholm (Fig. 6o). It is "a window looking toward the Atlantic." Göteborg has grown to be Sweden's second city in size, largely because of this location but also because its fine harbor never freezes.

Göteborg is the home of Sweden's fishing fleet and the centre of Sweden's shipbuilding industry. In exports, Göteborg leads all other cities in the country.

Figure 6o shows a water route across southern Sweden. It is formed in part by the Göta Canal. This route, much shorter than the

route around the end of the peninsula, is used in summer by many small passenger boats and freight boats, plying between Göteborg and Stockholm. It is well known to tourists. In winter, this cross-country waterway is frozen.

Four great resources. Passengers on the Göta Canal pass through locks near a huge hydro-electric power station. They pass floating logs on the way to pulp mills. Alongside the canal are iron and steel plants. For mile after mile they see well-kept fields and red farmhouses. These scenes suggest the four great resources which have helped to make Sweden a prosperous country.

Helps in Learning

1. As far as travel is concerned, Norway and Sweden might almost as well be on an island. Use the maps in Figures 5 and 6o in explaining why.
2. Why is it said that "Norway and Sweden turn their backs to each other"?
3. What is one important difference between Norway and Sweden in regard to weather? In regard to natural resources? In regard to use of harbors? Give reasons for your answers in each case.
4. Although most of its land has little value, Norway has become a prosperous country. Explain how this has been possible.
5. How has Norway's poverty in usable land encouraged fishing?
6. Why are the Kjölen Mountains called "the keel"?
7. Explain why Narvik is free of ice in winter, while Lulea is locked in ice.
8. The care of forests in Sweden is unlike that in some other countries which we have studied. Read again about forests in one of these other countries and tell how the use of forests there is different.
9. In what ways do you think a factory worker in Stockholm depends on the use of any one of the four great natural resources of Sweden?
10. Would Göteborg or Stockholm be the better location for the headquarters of a steamship line which has ships sailing from Sweden to Germany? Why?



Figure 200. In Berlin, before World War II

GERMANY

Downfall of a Great Country

War and ruin. September 1, 1939, is a tragic date. On that day Germany attacked Poland (Fig. 60). This was the beginning of World War II, the most terrible war in history.

When the war began, Germany was the strongest power in Europe. But the war proved its downfall. Under Adolf Hitler, Germany risked all and lost all. Hitler tried to conquer Europe and the world. He failed, and brought ruin to Germany.

Two scenes in the city of Berlin, Figure 60,

may illustrate the downfall of Germany. The picture on this page shows part of the city before the war. Berlin was then the capital of a mighty nation, a great city in population and area, in trade and industry.

The picture on the next page shows a street in the heart of Berlin after the war. It was reported that half the buildings of the vast city, like these buildings, were in ruin. Business and industry were paralyzed. The people who remained lived in misery amidst the rubbish.

Loss of territory. The map in Figure 202 shows the boundaries of Germany before



Figure 201. In Berlin, after World War II

World War II. It shows that the country had two unconnected parts. The eastern part, called East Prussia, was separated from the rest of Germany by land given to Poland by the victors in World War I. This was done so that Poland could have some seacoast.

The map in Figure 203 shows the boundaries of Germany after the war. These boundaries were not finally fixed, and may still be changed somewhat. It seems certain, however, that Germany has lost all of East Prussia. It seems likely, too, that Germany has lost all, or nearly all, of the land it had east of the north-south boundary line that follows the lower Oder River on the map. Most of the Germans who lived east of the line have been moved into what is left of Germany.

The Saar, on the west, was returned to Germany in 1957. It is a small area, as the map in Figure 203 shows, but it has rich coal deposits.

In starting the war, the leaders of Germany expected to conquer vast areas (p. 246). The German nation, they said, must have more

space. Early in the war they made many gains. Later these gains were lost, and much more. Germany is smaller, not larger, as a result of the war. It has lost, for the time being at least, nearly one-fourth of its old area.

Zones. Figure 203 also shows the four zones into which Germany was divided, after the war, by Britain, Russia, the United States, and France. Each of these nations is responsible for the zone that it controls. Each of them also controls part of Berlin. The Allied Control Council has its headquarters in Berlin.

The four zones of Germany were treated separately. Trade and travel between them could not move freely. Each zone needed foodstuffs or raw materials or manufactured goods from other zones. Little progress could be made in solving many problems while the zones were kept apart. They needed to be fitted together. In time the zones controlled by Britain, France, and the United States were merged, and the German Federal Republic, commonly called West Germany, was set up.

It has a population of about 53 million. In the Russian zone the German Democratic Republic, usually called East Germany, was organized. It has some 18 million people. The leaders in East Germany are Communists and act on orders from Russia. Today, then, Germany is not one country, but two. One may be sure that in time the two parts will somehow be reunited. It is said that nine out of ten Germans want reunion.

Repairing the damages. Progress in repairing the damages of the war has been slow in East Germany and amazingly fast in West Germany. East Germany is held back by Communism. West Germany is helped by its system of free individual action. The difference is great. West Germany also is much the larger part, has more resources useful in industry, and many more workers. The energy and skill of the workers would be hard to match in all Europe.

Recent travellers comment in wonder on progress in West Germany. They report that diesel trucks with trailers clog the main highways, that long freight trains follow one another closely in ceaseless procession on the railroads, that the Rhine is jammed with heavily laden barges, that the smokestacks of manufacturing plants in the leading industrial centres blacken the sky as in days before the war.

Trade is the lifeblood of West Germany. Its foreign trade is booming, hand in hand with its industries. Germans are even building industrial plants in other countries, for example, steel mills in India and Pakistan.

Helps in Learning

1. How many countries touch Germany (Fig. 6o)? What are the names of these countries? Do as many touch any other country that is wholly in Europe?
2. What differences between northern Germany and southern Germany are shown by the map in Figure 6o?
3. What large rivers in Germany flow into the

North Sea (Fig. 6o)? What river forms part of the present eastern boundary of Germany? What one forms part of the western boundary? How does the map suggest that these rivers are important highways?

4. In what ways does the map in Figure 6o show that Berlin is a very important city?

5. Tell what is meant by the terms "West Germany" and "East Germany." In which part of Germany has progress since World War II been "amazingly fast"? Explain why.

Agriculture

The big question. The skill of German farmers is well known. They have turned large areas of poor land into good farm land by hard work and good care. They improved the soils by fertilizers. Year after year, they continue to fertilize their fields. They rotate crops carefully. They combine grain farming and stock raising to advantage. They get larger crop yields to the acre than the farmers of almost any other country in Europe. Before World War II they raised about three-fourths of the food that was needed by the German people.

Can Germany get along in the future without greater need to import food? That is a big question. Germany now has for each of its people less than four-fifths of an acre that is used agriculturally. The large area in the east that was lost to Poland and Russia had been used chiefly for farming. It shipped large amounts of foodstuffs to the industrial centres of western Germany. The loss of the eastern farm lands is a heavy blow. If Germany is to feed itself in the future, it must get still more from its remaining farm lands. It must also use more land for farming.

Some increase in the production of many of the present farm lands is possible. For instance, more commercial fertilizer can be used in many places to increase crop yields. Farm tractors, when available, can be used in place of work animals. As a result, part of the land that has been used to grow feed crops



Figure 202. Germany before the war

Figure 203. Germany after the war





Figure 204. A farm village

for work animals would be free for growing human food. Before the war, most German farmers, like those who lived in the farm village in the picture above, used only horses or oxen in their work. From the outset the Allied Control Council permitted the manufacture of light tractors for farm use, and of other agricultural machinery.

Forests cover more than one-fourth of the area of Germany. Some of the land in timber could be cleared for farming. This would take time, of course, and it does not promise very much. In general, the forests are on the poorer soil or on high, steep land where a cover of trees is needed and ordinary farming is impossible. In such parts of the southern highlands as shown in the picture on the opposite page, for example, the land can be cultivated only in the valleys and on the gentler slopes. In the northern plain, there are some woodlands that might be cleared and used for growing grain.

At best, the food problem in Germany will be difficult. It is fortunate that German farmers are skilful.

Crops and farms. German farmers grow many crops, but a few are outstanding. Rye, oats, wheat, and barley are the principal grains. Potatoes and sugar beets are the other leading crops.

Rye and potatoes are the crops best suited to the light, sandy soils that cover much of northern Germany. Oats do best in the moist climate along the North Sea and Baltic Sea. Much wheat and many sugar beets are grown on the heavier soils along the southern edge of the northern plain, near the border of the highlands. Most barley is grown in southern Germany.

Much less land is used for vineyards in Germany than in France (p. 77). Most of the country is too far north for grapes to grow. There are vineyards, however, on the sunny slopes of some of the valleys in the south-



western part of the country. Best known are those along the Rhine River, where for many miles scenes like that in Figure 206 are common.

Facing the river in the picture is a long, narrow town, its buildings huddled close together. Behind the town the vineyards rise, one above another. On the lower side of each vineyard there is a low stone wall, built to keep the soil from washing away. Overlooking the vineyards, the town, and the river, the high walls of an old castle stand out against the sky.

Most German farmers have used part of their land for grass, clover, and other feed crops, for Germany has had a huge livestock industry. Many potatoes are fed to hogs. The tops and pulp of sugar beets are fed to cattle. Mangels and other root crops are raised as food for stock. Stock-raising in Germany depends less on pastures than it does in many countries. A smaller part of the land is used for pasture than in France, for example, or in Britain.

Hogs furnish most of the meat used. Cattle are kept chiefly for dairy purposes. As in other countries, there are most dairy herds on farms near the large cities.

As we should expect, all the main crops of Germany are grown here and there outside the areas best suited to them. Vegetables are grown almost everywhere. Orchards are very common. In some places, tobacco, flax, hemp, and hops are important.

All parts of Germany get rain enough for various crops (Fig. 58). No part is dry in summer. Some areas were naturally marshy or swampy. They had to be drained before they could be farmed. The growing season is not very long. Only one crop a year is possible on the same land. Germany's present food problem would be less difficult if more than one crop a year could be grown.

Most farms in Germany are small. They are worked by the families that own them. This helps to explain the large yields of crops

to the acre. A farmer who has only a few acres is likely to put much work on his land, in order to make it yield as much as possible. Many German farmers live in villages more or less like the one in Figure 204, and go to and from their fields.

Forest farming. It may seem odd to think of any forest land as being a kind of farm land. But trees are products of the soil, as much as wheat or oats. And land may be used to grow one crop of trees after another. If this is done, the work may be called forest farming.

Years ago, Germany made the care of forests a science, the science of forestry. Lands not fit for ordinary farming, but suitable for forest farming, were used to grow trees. Trained foresters manage the work. Seedlings from nurseries are planted where needed. Diseased trees are removed. Mature trees are cut with care. Young trees are protected. Useless undergrowth is destroyed. Great caution is taken to prevent loss of forests by fire.

Through the practice of forestry Germany has been able to supply most of its needs for lumber, paper pulp, and other wood products. In addition, the forests help, of course, to protect from erosion the slopes they cover and to regulate the run-off of storm waters and the flow of streams. Forests also add much to the attractiveness of many places in Germany, as Figures 205 and 206 suggest.

Helps in Learning

1. "It is fortunate that German farmers are skilful." Why is that especially true now? What can you tell about the industry and skill of German farmers?
2. Why is much land in Germany not suitable for farming? Give all the reasons you can.
3. The Germans drained large areas of marsh and swamp, and made them into good farm land. Do you think most of these areas were in northern Germany, or in southern Germany (Fig. 60)? Why?
4. Rainfall on the northern plain of Germany



Figure 206. Famous scenery along a famous river

© Gendreau

tends to decrease in amount from west to east. How do you explain this difference in rainfall? Which part of the northern plain, eastern or western, has longer and colder winters? Why? Which part, then, usually has a shorter growing season?

5. It has been said that in Germany a forest is tended as carefully as a field. What have you learned about the care that is taken of German forests?

6. Not very much poor land is used in Germany as natural pasture. Most of it is more valuable for growing forests.

The small amount of poor hill pasture helps to keep down the numbers of one kind of stock. What kind do you think it is? Cattle? Sheep? Hogs? Tell why you think as you do.

Industry

Rapid growth. Germany was united as one country in 1871, at the close of a successful war with France (p. 88). It depended mostly on farming. Soon afterward, manufacturing began to grow rapidly. By the outbreak of World War I, in 1914, Germany had become an industrial giant.

The rapid growth of German industry was due to many things. Germany had large deposits of coal to use. It also had iron ore, zinc, copper, lead, potash, and other useful minerals. It had much water power to develop. It had various raw materials from its farms and forests. German scientists made discover-



Figure 207. Strip mining

© Ewing Galloway

ies that helped greatly. The German government aided in every way possible.

Some of the mineral resources and the work of German scientists call for more comment.

Coal. Germany was fortunate in having much coal. Without the coal, it could not have become a great industrial country.

The richest coal field, with the best coking coal, is in the west, near the Netherlands border. It is called the Ruhr coal field, after the Ruhr River (Fig. 6o), a tributary of the Rhine. Here is the heart of the greatest industrial area in the country, with the thickest cluster of cities (Fig. 6o).

Farther south, another rich coal field and another industrial area touch the boundary of France. This area, too, is named from a river, the Saar (Fig. 6o). It is the area that

caused so much trouble between France and Germany. However, the Saar is again part of Germany. The people of the Saar are Germans, but their industry has been tied to that of Lorraine, which is in France (p. 83).

Before World War II, Germany's second most important coal deposits were in the southeast, on the old Polish border. Here, too, the Germans had developed very important industries. This area has now been lost to Poland (Fig. 203).

In parts of central Germany there is much soft brown coal, or lignite, near the surface. Figure 207 shows one of the open pit mines, in which brown coal is scooped up in big shovels, as the picture shows. This coal is produced cheaply, but it does not have high heating value and cannot be used for many purposes.

Iron ore. There is iron ore near the Ruhr, and in a few other places in Germany. It is not high-grade ore, and not of great importance. Efforts have been made to use more of it by new methods.

Before World War I, Germany owned the eastern part of the great iron-ore field of Lorraine (p. 83). It then had plenty of ore. The Lorraine deposits were lost to France at the end of that war. Afterward, Germany had to import most of the iron ore which it used.

Potash. Germany has immense deposits of potash. The largest are at Stassfurt (Fig. 60), in central Germany, where the first mines were opened about 100 years ago. Great amounts of potash were used as fertilizer, to improve the poor soils of the northern plain. Much potash was exported, for Germany had through many years an almost complete monopoly of the world's supply. Much was used, too, in some of the German chemical industries. Potash has been, then, a great resource.

Science and industry. No matter how many natural resources a nation may have or how rich they may be, they cannot alone bring about modern industrial development. Men must know how to use resources. They must have the means to use them. German scientists made many discoveries that opened up new ways or better ways of using German resources. They made great contributions to German development.

In 1897, for example, a German chemist succeeded in making artificial indigo from coal tar. The tar itself was a by-product of the manufacture of coke. Artificial indigo was much cheaper than natural indigo, obtained from the indigo plant that grows in some tropical countries. Other coal-tar dyes soon were developed by German scientists. Large dye factories were built. A great industry grew up. For years, Germany supplied four-fifths or more of all the dyestuffs used in the world.

In 1912, a German scientist invented a process of taking nitrogen from the air, and making nitrates. This freed Germany from dependence on Chile for nitrates, used chiefly as fertilizers and in making explosives. So another industry was born.

German scientists helped to develop many other industries. Germany had little petroleum. A substitute was made from coal. Germany had to import rubber. A substitute, called synthetic rubber, was made from coal. In the manufacture of many drugs, medicines, plastics, and artificial fibres German science led the way.

Centres of industry. All the German cities named on the map in Figure 60 and many more are important centres of industry. Only a few of them can be mentioned. Much space would be needed to tell something about all of them.

Berlin, as we have learned, was a city of ruins after World War II. But it did not stay that way. The city has recovered. Streets are busy with people. New stores and beautiful modern office buildings have been constructed. Although Berlin is in East Germany, West Germany controls part of the city. Thus, it is a kind of island of West German territory in East Germany. As you might expect, this has held back the city's prosperity. Nevertheless, West Berlin is still a great centre of trade and industry.

Before the country was divided into two parts, Berlin had excellent connections by railway and canal with all Germany. Berlin produced electrical equipment, machinery, chemicals, scientific instruments, clothing, paper and books, and many other products. Berlin still produces specialized goods.

Hamburg and Bremen, seaports on the North Sea, are the leading centres of shipbuilding. Both cities have other important industries. Hamburg has a population of about one and a half million. It is the second largest city in Germany.



Figure 208. In the Saar, beehive of industry

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The Ruhr is the greatest industrial area in all Germany. For 40 miles or more along the little Ruhr River, towns are so close together that they look like one continuous city. The area seems crowded with coal mines, coke furnaces, iron and steel mills, foundries, and plants of many kinds that use crude iron and steel. A forest of tall chimneys reaches into the smoky air above the mills and houses and web of railroads. Here five million people mine the coal and make the iron and steel on which depend German industry and also much of that of western Europe. The Ruhr, though a small area, was, and still is, one of the great prizes of the world.

The largest city of the Ruhr is Essen (Fig. 60). It is the home of the Krupp Works, the biggest machine shops in Europe. The Krupps make steel of several kinds and many shapes, for their own use and for sale. They

manufacture rails, car wheels, steam engines, ship plates, and machinery and tools of many sorts, both large and small.

The Saar is much like the Ruhr, on a smaller scale. Its cities are not nearly as large. Iron and steel and their products form the backbone of industry. Figure 208 shows a foundry, near some coal mines. Similar scenes are common in the Saar.

Between the Ruhr and the Saar, there are busy centres of industry in the Rhine Valley and its tributary valleys. Chemicals and textiles are important products. Cologne (Fig. 60), the largest city, has most industries.

In the highlands in the southern part of the country, there is much less manufacturing. Beer is made in Munich (Fig. 60), and other places, from barley grown on valley farms. The forests furnish wood for village industries. Clocks are made in some villages. Toys are made in many homes dur-

ing the snowy winters. Some of these toys find their way to stores in Canada and the United States.

There are large manufacturing plants in the cities and some of the towns south of Berlin, near the border of the plain and the highlands. These plants include beet-sugar factories, textile mills, and chemical works. Dresden (Fig. 60), one of the larger cities, gives its name to "Dresden china," made near-by.

Up from the ruins. In thinking of the amazing recent progress made by West Germany (p. 248), one should keep in mind the ruined condition of the country when the upward surge started.

During the war, thousands and thousands of factories and mills were destroyed or damaged by bombing or in battle. The Ruhr suffered most. Its peace-time industries had been turned to war production. It was the main arsenal of Germany. It was also near the northwestern boundary of Germany, within easy flying distance for planes from Britain. For these reasons, it was often a target for bombing raids. Before the end, it was the scene of heavy ground fighting. This caused more destruction. Little remained unharmed. Berlin, Hamburg, and many other cities suffered little less than the Ruhr.

Bombing and battle were not the only reasons for industrial loss. Most of the great industrial area in the southeastern corner of old Germany, with its mines and remaining mills, was lost to Poland (p. 247). Following the war, much industrial equipment was taken out of the country, mainly from the Soviet Zone (Fig. 203). In these three ways, German "industrial capacity," the means to make things, was reduced greatly.

What is more, a full year after the surrender of the Germans, transportation remained largely broken down. There was still a great shortage of raw materials. The shortage was made worse by the isolation of the four occupation zones (p. 248). Confusion was general,

the outlook uncertain. Then West Germany, in spite of its ruined condition, pushed ahead until today it is one of the most prosperous countries in Europe.

Helps in Learning

1. Where in Germany are the deposits of good coal? The deposits of low-grade coal? Do you think it would have been better for Germany if the good coal had been in the interior of the country, and the poor coal on the borders? Why, or why not?

2. Before World War II, some things about manufacturing in Berlin, London, and Paris were much alike. What were they?

Before answering this question, you may need to read again about manufacturing in London (p. 26) and Paris (p. 87).

3. What have you read which helps to explain why big chemical plants were built at and near Stassfurt?

4. Write a short story about "science and industry in Germany."

5. There are pictures in earlier chapters that show scenes in other countries somewhat like the view in Figure 208. What countries are they? Look back to see if you are right.

Trade

Side by side. When Germany became a great manufacturing country (p. 254), it also became a great commercial country. Large industries without trade would have been impossible. Large trade without industries would have been equally impossible. Trade and industry developed side by side. Each helped to support the other. It does so now, in these days of new growth and new strength.

Transportation. To help both trade and industry, the German government developed a great transportation system. At the outbreak of World War II, Germany had nearly 34,000 miles of railroad, more than 200,000 miles of highways, almost 4000 miles of in-

proved river routes, and about 1000 miles of canals. Taken together, they formed a very close network.

The main rivers were useful highways in the beginning. They have been improved greatly by dredging, and in other ways. They have been joined together by canals, and so a connected system of waterways has been formed.

The improved waterways of Germany have been like arms of the sea. Much freight brought to German seaports by ocean ships moved inland on river and canal boats. Much freight from the interior reached the coast on river boats, for shipment in ocean freighters. Germany improved its waterways partly in order to help its ocean trade. Of course, the rivers and canals also have helped much trade that began and ended within the country. German waterways have been used far more than the waterways of most countries.

The Rhine is the greatest river highway in Europe. Small sea-going boats can go up the river to Cologne (Fig. 6o), a great river port before the war. Most of the traffic on the German section of the river is carried in barges. They can reach the southern boundary of the country during most of the year.

The Elbe is next in importance to Germany. It can be navigated all the way across the country. Hamburg (Fig. 6o), near the mouth of the river, was the greatest seaport on the continent before the war.

The Oder and the Weser have been used less than the Elbe. The Oder flows to the Baltic, always far less important to trade than the North Sea. The Weser is much shorter than the other rivers. But Bremen (Fig. 6o), near its mouth, has been Germany's second seaport.

Superhighways. The latest improvement for transportation in Germany before World War II was a system of superhighways that was begun by Hitler in 1933. Figure 209 shows

one of these highways southeast of Munich (Fig. 6o). More than 8000 miles of such motor roads were planned by Hitler. Nearly half of them were completed before the outbreak of the war.

These roads were intended solely for high-speed traffic. They ran through open country, by-passing cities and towns. All curves were gradual. All slopes were gentle. There were no grade crossings—only overpasses and underpasses. Without grade crossings, there was no need for stop lights. The use of the roads by people on foot, on bicycles, or in horse-drawn vehicles was not allowed. The superhighways were planned chiefly for the swift movement of motorized military forces, not for ordinary motor traffic. They were part of Hitler's preparation for war.

Exports and imports. As we have seen (p. 255), Germany has to import much iron ore for its steel industry. The ore comes from Sweden and France. Germany also has to import almost all of the material for its textile mills. Much of the cotton it uses comes from the United States. Wool comes from Australia and Argentina; silk, from Japan; and jute, from the farms of India.

Germany also imports some foodstuffs. Meat, lard, butter, and eggs, for example, come from near-by agricultural countries. Such things as citrus fruits, rice, coffee, and cocoa come from overseas.

Among Germany's exports are iron and steel, coal and coke, machinery, fabrics, paper and paper products, glassware, dyes, and optical and scientific instruments. "Made in Germany" is a statement found on many goods, in many countries.

In general, then, Germany imports raw materials and some foodstuffs. Almost all of its exports are finished goods. Germany is one of the world's leading trading countries. Before the war, it was outranked only by the United States and Britain. The picture in Figure 210 shows part of the river front at Bremen, crowded with big ships from coun-



Figure 209. A modern highway for fast travel

© Screen Traveler, from Gendreau

tries far and near. Germany's future as a trading nation will doubtless improve even more.

The West and Germany

West Germany stands with the democratic western countries in determined opposition to Communism. It needs their support. They need its help as a partner in defence. Russia tries, of course, to block their plans for co-operation.

One great step toward cooperation was taken in 1953. Six countries then became by treaty a single market for coal and steel. These countries are West Germany, France, Italy, Belgium, the Netherlands, and Luxem-

burg. A purchaser of coal or steel in any one of the six countries can now buy it in any of the other countries, as if there were no boundaries between the countries. No barriers against such free trade are allowed under the treaty. The same arrangement may be made in time for other products.

West Germany is also a member of a number of other international bodies. The most important of these is the North Atlantic Treaty Organization (NATO), which West Germany joined shortly after it became an independent country in 1955. West Germany started a rearmament program in 1956 and is now an important contributor to the defence of western Europe. Though West Germany is not permitted to have nuclear weapons



Figure 210. Part of the harbor at Bremen

© Wide World Photo

NATO forces with these weapons are stationed there. The world moves strangely, and Germany is again dominating European affairs.

Helps in Learning

1. Do you think that Germany's central position in Europe has helped, or hindered, its trade? Why do you think so?
2. Find the Kiel Canal on the map in Figure 60. It is a broad, deep waterway, completed in 1895. Why do you suppose Germany built this canal? The map and some of the statements you have read should suggest two good reasons.

3. Which canal, the Kiel Canal or the Göta Canal (Fig. 60), do you think has been more important in international trade? Tell why you think as you do.

4. Show, as clearly as you can, how the trade problems and industrial problems of Germany before World War II, were tied together.

5. Tell all that is suggested to you by the scene in Figure 210.

6. Tell ways in which some of the nations in Europe are trying to cooperate. Explain why this cooperation among nations is desirable.

7. Can you now add anything to the answers you gave to some of the questions on page 248 when you studied them before? If so, what?

BETWEEN EASTERN AND WESTERN EUROPE

Nine countries. This chapter tells how people live in nine countries. These countries are Finland, Poland, Czechoslovakia, Austria, Hungary, Rumania, Bulgaria, Yugoslavia, and Albania. They are shown on the map in Figure 60. They form a broad belt between Russia and the remainder of Europe—between East and West.

The scourge of war. All nine countries had a part in World War II, on one side or the other. Doubtless there was no way in which any of them could have kept out of the war. Hitler's plan to rule Europe would have made that impossible.

There were other reasons, too. These countries were squarely between Germany and Italy, on one side, and Russia, on the other side. Most of them probably hoped to benefit from taking part. Some of them hoped to make sure of keeping territory they had gained at the end of World War I. Some hoped to regain part or all of the territory they had lost in the earlier war.

Half or more of these countries were weakened by strife between groups within their own borders. Each of these divided countries had people of various nationalities, with conflicting ideas and wishes.

Soon or later, all nine countries were invaded by hostile armies. Canada was at war with three of them—Hungary, Rumania, and Bulgaria—when it joined Britain and France in the war against Germany and Italy. All nine countries suffered greatly.

Great numbers of people fled from their home lands during the war, or were driven from them. Many of these people could not or dared not return to their old homes. They had nowhere to go.

Then Communism. The scourge of war was followed by an invasion of Communism. Today six of the nine countries are firmly in the grip of the Communist party. They are Poland, Czechoslovakia, Hungary, Rumania, Bulgaria, and Albania.

All six of these countries faithfully follow the example of Russia. Their leaders are closely connected with the Kremlin. Their way of life, with its lack of individual freedom, its state plans for agriculture and industry, and all the rest (pp. 104-136), is the Russian way. They stand with Russia in its disputes with the leading countries of the West.

Yugoslavia broke away from Russian influence in 1948. It is, however, a Communist state, ruled by a dictator. For the present, at least, it has become an ally of the West in building defences against possible Russian attack.

Finland stood firmly against the influence of Russian Communism. The Finnish people know well the meaning of the magic words freedom and independence.

Austria, like Germany, was divided at the close of World War II into four zones, controlled by Britain, France, the United States, and Russia. After long delays the four occupying powers finally signed an Austrian treaty in May, 1955. After seventeen years of occupation, first by Germany, then by the Allies, Austria once more became a "sovereign, independent, and democratic state."

Progress. Some of these countries have made more progress than others toward repairing the damages of the great war. Some have had more money than others to use. Some have more and better natural resources



Figure 211. In a land of forests and lakes

than others. In some, the men in government and the common people are more capable than they are in others. Finland is one of the countries that has made steady progress. It has rather few resources, but its people are united, intelligent, and industrious. People count most everywhere.

Finland

Wood and water. Finland, Figure 60, is a country of forests and lakes, like much of Ontario and Quebec. Forests of pine, spruce, and birch cover three-fourths of the land. Thousands of lakes, dotted with many thousands of islands, provide countless scenes like that in the picture above.

Less than one-tenth of Finland is farm land, and little more than half the land in farms is cultivated. Almost every farm has its woodland. Most farms, like those in the picture, are in a forest and near water. Everywhere, timber and water are close by.

Streams join the Finnish lakes, and carry their out-flowing waters to the sea. The lakes act as natural reservoirs, regulating the flow

of the streams. Some lakes are connected by canals. The lakes and streams and canals form a great system of waterways. They are the main highways of the country. Many streams, broken here and there by rapids or waterfalls, provide much cheap water power.

It may seem strange, but it is true, that the greatest two natural resources of Finland are wood and water.

Harvesting and transporting timber. Winter is harvest time in the forests. Thousands of men—from farms, fisheries, and towns—work in hundreds of logging camps. The logs they cut are hauled by sledge or motor over the snow to the frozen waterways. There the logs are piled, to wait for spring and open water. When the ice melts, almost every waterway, whether big or little, becomes a highway for logs.

On the streams, the logs usually float singly. Where a stream is shallow and narrow, men on shore push the logs along with steel-tipped poles. Where a river is wide, as in Figure 212, a long “boom,” made by chaining logs together, end to end, keeps

the floating logs in the fairway. When the logs reach a lake, they may be lashed together in rafts which are towed across. A string of rafts may be many hundred feet long. It may contain many thousands of logs. Rafts may be broken up and put together again, time after time. Several years actually may pass before the logs from a remote logging camp end their journey in a sawmill at some power site, or reach the sea. The season of open water is short.

Caring for the forests. Scientific forestry is practised in Finland. As a result, the forest resources of the country are increasing in spite of the great amount of timber cut each year. Mature trees may be cut only in a way to protect young trees near them. Young growth may be cut only for reasonable thinning. Forest conservation boards inspect logging operations. They employ trained foresters who give advice and help to timberland owners.

The government-owned forests are managed carefully by a Department of Forestry. There are several forestry schools, really colleges, where forest problems are studied, experiments are made, and foresters are trained. Everything possible is done to help Nature renew the forests, so that new generations of trees will grow up in the place of those cut down.

Finland is wise in taking good care of its forests, for it draws much of its support from them. About a third of the Finnish people depend for their living on wood industries—on cutting and transporting timber, on sawing and handling lumber, on making and selling wood products. Before World War II, wood products accounted for about four-fifths, by value, of the total exports of the country.

Farm lands and farmers. Though good for growing forest trees, most of Finland is not fit for growing ordinary crops. Thousands of years ago, the whole country was covered thickly by an ice sheet. The slow-moving

ice carried away the soil, and scoured the rocks below. It rounded off the hills, and gouged out hollows. When finally the ice melted away, it left thin, stony deposits, on which poor soils have formed, and much bare rock. Water gathered in the deeper hollows, forming lakes. Swamps developed over large areas. Only in scattered places is there good soil for farming.

The best soils are on the southern and southwestern coastal plains (Fig. 60). There the farms are thickest, the population densest. On the whole, as we should now expect, the country is settled thinly. It is larger than the British Isles, but has a population of only some four million.

Figure 212. Part of Finland's greatest harvest

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© James Sawders

Figure 213. A modern hospital in Helsinki

The harsh climate also helps to make farming difficult. Finland is a cold land. It is hard for a farmer to get, in the short summer, enough food from his garden and fields and enough fuel from his woodland to last through the long winter. Most of the farms are small. Many Finnish farmers must earn extra money away from their farms, in winter logging camps or elsewhere, in order to live. Finland has to import part of the foodstuffs it uses.

The main crops are hay, rye, barley, oats, potatoes, and turnips. About half the cultivated land is used for hay. Grass grows better than grain in the short, cool, moist summers. Dairy farming is more important than grain farming.

Finnish farmers are quick to use new and better methods, if possible. For example, hay that is cut too late in the season to dry is put into a hole dug in the ground, along with the tops of root crops. A liquid chemical is sprinkled on top. This chemical keeps the

hay moist, and helps to preserve its food value. These underground "silos" have been a great success. Dairy cows seem to like fodder from them quite as much as they like fresh grass.

Cities and industries. There are few cities or large towns in Finland. Four out of five Finns live in the country. Helsinki, capital and seaport (Fig. 60), is the only large city. It has more than 350,000 people.

In some ways, Helsinki is a model city. It is solidly built—of granite, brick, and concrete. The style of many of its buildings is very modern. An example is the hospital shown in Figure 213. The streets are quiet, even in the business section. Only in an emergency may sirens, gongs, or whistles be sounded. The city is clean. No coal smoke fouls the air. Helsinki is justly proud of its fine railroad station, its many cooperative stores, its neat apartment houses, its parks and schools.

The smaller cities and towns, like Helsinki, are clean and quiet, even though factories are scattered through them.

The largest industries of Finland are based, of course, on water power and timber. Almost half the workers in all lines of manufacturing are employed in making wood products: lumber, plywood, wood pulp, paper, even spools to hold thread.

In the cities and towns, on the farms, and in the forests, the Finns make the most of the opportunities they have. Intelligent, thrifty, hard-working, they are "a forward-looking people."

Helps in Learning

1. Young Finlanders often go to school by boat. Why, do you suppose, is this so? Can they go to school by boat most of the time, or not? Why?
2. Most farm homes in Finland are log houses. How do you explain this?
3. For its size, Finland has not very many

miles of railroad. What have you read which probably helps to explain this fact?

4. Finland has no coal deposits or oil deposits. What does the country have that helps it to get along without these resources?

5. Why are wood products and dairy products the leading exports of Finland?

6. What does the map in Figure 66 show about the general distribution of people in Finland? What reasons can you give for that distribution?

7. What can you say to show that the Finns are "a forward-looking people"?

8. The two great natural resources of Finland are wood and water. Tell how Finland's water resources help in the logging industry and in the manufacture of wood products.

9. Why must Finnish farmers be interested in exploring new methods?

Poland

Ups and downs. The fortunes of Poland, Figure 60, have changed greatly, time after time. Once it stretched almost across Europe, from the vicinity of the Baltic Sea to the Black Sea. Whatever its size, the country seldom was free from trouble, either from the inside or from the outside. More than once, parts of it were reduced to a smoking wilderness.

Finally, near the close of the 18th century, Poland was divided into three parts by Russia, Prussia (then the leading German state), and Austria. Each of them annexed the part of Poland it got. For nearly 130 years afterward there was no independent country of Poland. The Polish people lived under foreign rule.

At the end of World War I, a new Poland was created by the victorious Allies. At the outbreak of World War II, after about 20 years of freedom, Poland had the boundaries shown in Figure 202. As a result of the second world war, Poland lost much land in the east to Russia (Fig. 83). At the same

time, it gained valuable land in the north and west from Germany (Fig. 203). The western boundary will be fixed with certainty when the necessary treaty of peace is made with Germany (p. 247). It probably will be the line that is shown on Figures 60 and 203.

The Polish nation, we see, has had many "ups and downs." The *nation* is old. The first Polish king was crowned in the year 1000. From then till now, the national spirit of the people has been kept alive, even when all seemed lost. The *country* of Poland, as it now exists, is very new.

An open plain. Most of Poland is in the great plain of northern Europe (Fig. 60), without natural barriers to the east or west. This area always has been open to attack from either side. That helped to make it in the past a troubled land.

The Carpathian Mountains (Fig. 60), with peaks above 8000 feet, form most of the southern frontier of Poland. The plain slopes northward from the mountains to the sea. It is crossed by several rivers. The largest river is the Vistula. Much of the plain is nearly flat, but in the north there are many low hills and many shallow lakes.

The call of the sea. Old Poland had no seacoast much of the time. This was a great disadvantage. Now and again a foothold on the coast was won, but only to be lost soon or later.

The new Poland created at the end of World War I was given a narrow strip of land, called the Polish Corridor, across German territory to the Baltic Sea (p. 249; Fig. 202). The seaport of Danzig (Fig. 202), with a population largely German, was not included in the Corridor. It was made a Free City. Poland had only the right to use the port and to share in its management.

The arrangement about the Corridor and Danzig caused much friction, but it did give Poland an outlet to the sea. The Poles built a new port and a new city, called Gdynia

(Fig. 202). Work was begun in 1923. In 15 years the place was changed from a small fishing village on a sandy beach into a city of 120,000 people on a roomy harbor.

The harbor was protected by breakwaters. It was dredged deep enough for large ocean ships. The harbor basins were fringed with miles of docks and warehouses. There were special docks for different things—one for cotton, another for grain, a third for coal, and so on. There were railroad tracks at the water's edge, and huge cranes to handle heavy freight.

Gdynia meant much to the Polish people. The nation, free once more, had an opening to the ocean highways. It could reach new markets, and develop new trade.

Present conditions and prospects. As we have seen, Poland lost territory on the east and gained territory on the north and west as a result of World War II. The area gained is much smaller than the area lost, but it is much more valuable. The troublesome Corridor is gone. The coast line is greatly lengthened. A rich industrial area, with great mineral resources, is added at the southwest. The farm lands that are gained in the west are much better, in general, than those that are lost in the east.

For these gains, a heavy price was paid. All Poland was a battleground in World War II. Hitler attacked Poland by land and from the air on September 1, 1939 (p. 246). By the middle of the month, Polish resistance collapsed suddenly except in and near Warsaw. A few days later, Russian troops invaded Poland. By the end of the month Germany and Russia reached an agreement to divide Poland between themselves. But in June, 1941, Germany declared war, without warning, on Russia. German armies fought their way on across Poland and far into Russia (p. 106). The tide later turned, and Russian armies swept westward through Poland, far into Germany (p. 105).

Poland suffered staggering losses in life

and property. Much of the country was wrecked. Many cities and towns, homes and factories, railroads, bridges, and other things were destroyed. The giant task of rebuilding was begun as soon as possible, but it is proving long and hard. Even so, the Polish people have a better chance than ever before, *if they work together*, to develop a strong, balanced national life.

Striking a balance. A better balance between agriculture and industry is one of the things most needed. Before the war, the population of Poland was about 35 million. About two-thirds of the people depended on farming for a living. Less than one-fifth of them depended on industry. There are too many farmers, too few industrial workers. More chances for work in factories are needed. A larger home market for the products of Polish farmers is needed. It can be supplied only by industrial growth. More manufactured goods are needed from Polish industries.

Poland has realized these needs. It has built new industrial plants, and repaired many that were damaged in the war. It has encouraged people to move from farms to industrial centres. It has even *forced* many farm people to work in factories.

Poland has advantages for manufacturing. It has coal, iron ore, zinc, oil, and rock salt. It has large stands of timber, and some water power. It has various farm products that are useful as raw materials. It has a great supply of labor. It has a large home market for goods, and access to foreign markets by land and sea. At present, it lacks enough capital (money) with which to replace some of the old industries and develop new ones.

Where they are. The deposits of coal and zinc are in the southwestern corner of the country—larger now than before the war. Here, too, there are blast furnaces, steel plants, rolling mills, smelters, chemical works, and the like. Figure 214 is a scene, before the war, at one of the steel plants. Molten

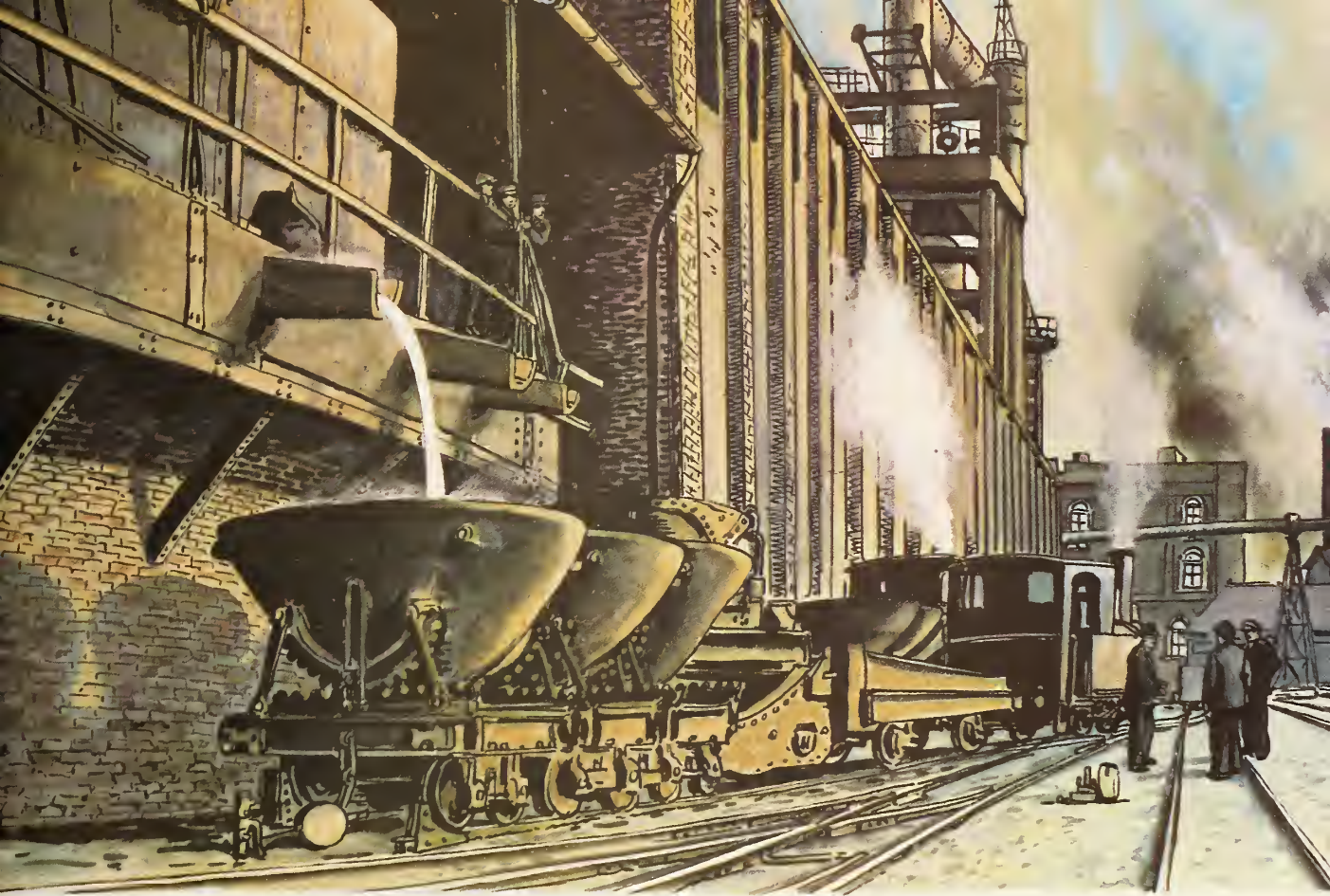


Figure 214. A sign of Poland's future in industry

metal was being poured into vats on flat cars. Such scenes will again be common in this area, for it is certain to remain the leading area for heavy Polish industries.

The deposits of iron ore are in the central and southern parts of the country. The ore is not of high grade, but it yields raw material for many foundries. High-grade ore has been imported from Sweden, through Gdynia.

The oil fields, several in number, are in the foothills of the Carpathian Mountains. Near the oil fields there are oil refineries.

Not far from Cracow, Figure 60, there are deep salt mines that have been worked for centuries. In addition to meeting ordinary needs for salt, these mines have helped to support a chemical industry.

Swift streams flow down from the Carpathians. In the foothills there are good places

on some of these streams for storage dams and power plants. Several big dams were being built before the war. It was planned to use the water power and mineral deposits nearby in developing a central area of heavy industries that would be second only to the southwestern area. Doubtless the plan will be carried out fully in time.

Scattered forests cover nearly one-fourth of Poland. They have been given little care. The largest forests are in the Carpathian Mountains. The most common trees are pine and spruce. Wood industries are distributed widely. Lumber, plywood, veneer, pulp, paper, and furniture are among the products.

Flour mills, meat-preserving plants, and beet-sugar refineries make foodstuffs from farm products. These industries, too, are distributed rather widely.



Figure 215. A Polish farmstead

From photograph taken by Louise A. Boyd

Textile mills at Lodz (Fig. 6o) and several other cities have made goods from imported wool, cotton, and jute, and from home-grown flax and hemp.

Farm villages and homes. Most Polish farmers live in villages. Isolated farm homes are rare. In some villages, the houses are close together on both sides of a single road. In others, the houses stand well apart along one side or both sides of a road. In still others, there are houses on both sides of several streets. Village patterns vary.

In most sections of the country, the houses and other buildings are made of wood. The outside walls of many houses are white-washed. In many, there is a loft above the living rooms. The roofs, rather steep, are covered with thatch—commonly the straw of rye or wheat. Dry thatch catches fire easily, and many people keep long poles at hand for beating out the flames. In some cases, a wooden house and barn are combined in one building. In many cases, the two stand apart.

Where wood for building is not plentiful, brick or stone is used.

Figure 215 shows a log house, with rye thatch on the roof. Tall bundles of hemp are piled against the side of the house. At the end, there are bunches of clover. The clover is being dried and saved for the seed. The simple farm implements in the picture are made of wood. Such homes are very common.

Farmers from villages throughout the country go on market days to the nearest town or city. Early in the morning their wagons move in long lines along the dirt roads, carrying farm people, farm produce, and perhaps the products of home industries. The day is spent in the market place, bargaining and visiting. In the evening the roads are crowded again, as the farmers return to their village homes.

Farm lands and crops. Most of the big country estates once common in Poland were broken up. Today, most of the farms are

small. Many are called "dwarf holdings," because they contain only four, six, or eight acres. If enough people can be shifted from farming to manufacturing (p. 266), many dwarf farms can be combined into larger holdings. Farms of reasonable size probably will be provided, too, in the areas taken over from Germany. At least five million Germans who lived there were driven out and replaced by Polish settlers.

After World War II, many changes were made in Polish farming. Some farms were organized as "collectives," as in Russia. Some new machines were put into use. The government has done other things to improve farm life. They include better seed selection, greater use of fertilizers, the drainage of wet lands, and the use of new crops. But much must still be done.

Rye always has been the leading cereal crop in Poland. Other grain crops are oats, wheat, and barley. Many sugar beets are grown in the west. Potatoes are an important crop everywhere. Flax, hemp, and tobacco are some of the less important crops.

Cities. Though Poland was chiefly an agricultural country, it had large cities that were growing rapidly before World War II.

Warsaw is the capital and largest city (Fig. 60). The war left the city in ruin. Most of the people had left, or were dead. Now it has been rebuilt under plans laid down by the Communist government. It has regained a population of more than one million, and is the show place of the country. No other place is located so well as Warsaw to serve as capital and commercial centre of the country. It is on the Vistula River, Poland's greatest natural highway, at the head of steam navigation. It is the hub of the railroad system. In the minds of the Polish people it has no rival as the future capital of the country.

Some Polish cities are old. Others are young. Cracow (Fig. 60), capital in early times, is oldest. It was founded more than 1200 years ago. It contains many historic

buildings which happily escaped destruction in the war. Chief among these buildings are a royal castle and a cathedral, standing on a low hill. This spot has been a Polish national shrine. More than any other place, Cracow recalls the life of Poland in the past. The youngest of the large cities is Gdynia (p. 265). It points the way to the future. If given a fair chance, the people of Poland should prosper in the future. Whether they will get this chance under Communist rule is the question.

Helps in Learning

1. The position of Poland has been dangerous in one way. It has been advantageous in another way. Explain, with the help of the map in Figure 60.
2. On the whole, farming is better in what once was German Poland than in what once was Russian Poland. What reasons for this can you give?
3. Do you think the Polish countryside is settled too thickly, or not? Why do you think so?
4. What crops are important in northern Germany, in Poland, and also in the northern part of the great farming area of European Russia? (You may need to look again at the chapters on Germany and Russia before you answer.) How do the maps in Figures 60 and 58 help to explain the situation?
5. What have you read about the forests of Poland that is very different from what you read about the forests of Finland?
6. In what part of Poland are most of its large cities (Fig. 60)? Explain why.

Czechoslovakia

Czechs and Slovaks. Czechoslovakia, Figure 60, is the land of the Czechs and Slovaks—two Slavic peoples. Most of the Czechs live in the western part of the country. Most of the Slovaks live in the eastern part. The two peoples are closely related. Their languages are almost alike. But the Czechs have

made much greater progress than the Slovaks. They have developed manufacturing to a greater extent. They are better farmers. They lead in many ways.

Before World War II, people who were neither Czechs nor Slovaks made up nearly one-third of the population of the country. Germans formed the largest group. They caused much trouble.

The total population of Czechoslovakia before the war was nearly 15 million. In much of the country, settlement was thicker than in Poland. Industry and agriculture were balanced much better.

In the middle. Czechoslovakia is surrounded by five countries (Fig. 6o). It is about halfway between the Baltic Sea and the Adriatic Sea. It also is roughly halfway between the North Sea and the Black Sea. Its outlets to the seacoast, by river or rail, cross wide areas of foreign land. It must rely on foreign ports. Much depends on the good will of surrounding countries.

The Elbe River and Oder River are highways leading to the northern seas. Several navigable rivers of Czechoslovakia flow into the Danube, a great highway which forms part of the southern boundary and leads to the Black Sea. Because of the position and east-west length of Czechoslovakia, it is crossed by important north-south railroad routes. Figure 6o shows two of them.

Much of the northern boundary of Czechoslovakia lies in mountains (Fig. 6o). Much of the southern boundary crosses an open plain. Even the higher and more rugged parts of the frontier no longer form strong barriers. Mountains everywhere have lost much of their earlier value for defence (p. 88). Then, the very position and the shape of Czechoslovakia make the country hard to defend. It has been good in some ways, but hard in others, to be "in the middle."

Beehives of industry. Western Czechoslovakia, called Bohemia (Fig. 6o), is the industrial heart of the country. It has deposits

of coal and of iron ore. In its mountains, copper, lead, silver, and gold are found. In the mountains, too, there are fine stands of timber and much water power. Finally, there are the products of fertile farm lands. Many places are beehives of industry.

The chief centres of heavy industry are on or near coal fields. Figure 216 is a scene in one of them. It shows the famous Skoda Engineering Works, in southwestern Bohemia. This huge plant was used first in making cannon and other equipment for war. Later, it was used to make automobiles and machinery.

It is a big jump from heavy armament to delicate glassware, but it suggests the wide range of Bohemian industry. Glassware made in Bohemia has enjoyed great fame for centuries. This fame has rested largely on the skill of the workers who blow glass and cut glass and on the beauty of the colored glass produced. Glass is made, for example, in many lovely shades of red, green, purple, and blue.

Bohemian glass was made first near the northern and northwestern frontier, in places where sand and timber were close at hand. Sand was needed, of course, as the raw material. Wood from the mountain forests was used as fuel in the ovens and furnaces. Later, coal came into use as fuel and much of the sand needed was imported from Germany. New centres replaced some of the old centres in the industry.

Another Bohemian industry known around the world is the making of fine porcelain. This industry, too, is centuries old. And just as local deposits of good sand helped to start the glass industry, so local deposits of suitable clay helped to start the porcelain industry.

Bohemia has many industries besides those that have been named. There are numerous breweries, sugar mills, textile mills, shoe factories, paper mills, furniture mills, chemical plants, and metal works. Some industries

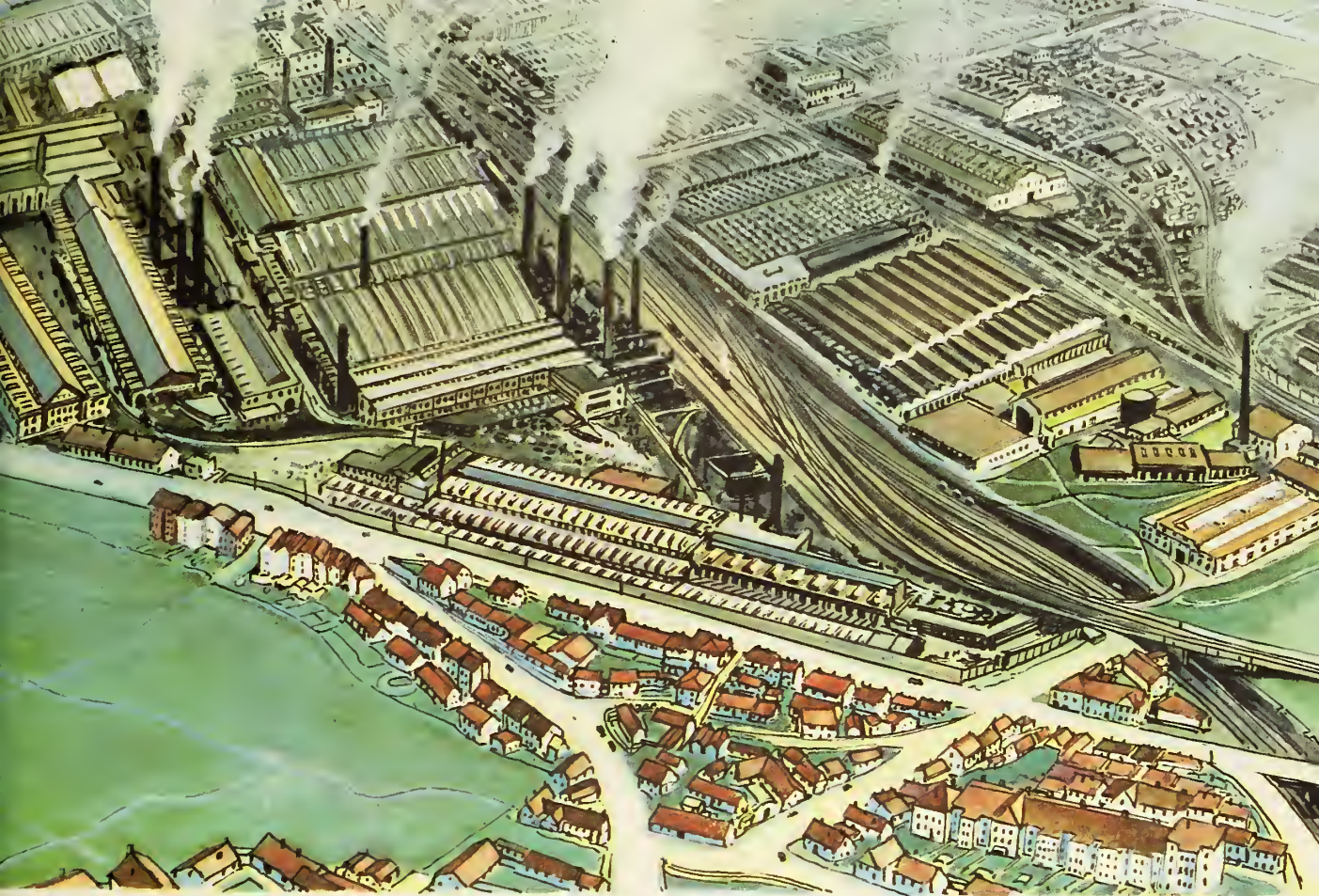


Figure 216. The famous Skoda Works

use only local products as raw materials. Others use both home products and imported materials. Still others must import all the raw materials they use.

In earlier times, many arts and crafts were practiced by the farm and village people of Bohemia, in their homes. Most of the old home industries have died out. The products could not compete with the products of modern factories. Farmers' wives still make much beautiful embroidery, however, and some of it has been sold in distant lands. "Quality products," whether made in factories or homes, are the ones that have reached most distant markets.

Farming in Bohemia. Farming, as well as manufacturing, is highly developed in western Czechoslovakia. No ground is wasted. There are few fences. The boundaries of most fields and farms are marked by corner-

stones. Fruit trees border many roads. Apple, pear, cherry, and plum trees are the leading kinds. Isolated farmsteads dot the land. Here and there a cluster of whitewashed houses, grouped, perhaps, around a church, forms a farm village. At longer intervals, there are towns. They serve as collecting and distributing centres for the farm lands that surround them.

The farmers rotate their crops, and fertilize their fields regularly. Wheat, barley, rye, and oats are the grain crops. The other crops of chief importance are potatoes and sugar beets. Hops of fine quality are grown in some sections. Every farmer keeps livestock, mostly cattle and hogs. Cattle are commonly fed in stalls, both summer and winter. The amount of land in pasture is rather small.

The men in Figure 217 are hauling in sugar beets. Such scenes are very common



Figure 217. A common scene in the farm lands near Prague

© Ewing Galloway

each autumn, for Czechoslovakia is a large producer of sugar beets. The picture was taken in the rich farm lands near Prague (Fig. 60). Prague is the capital and largest city of Czechoslovakia.

The centre of national life. Before World War II, Prague was considered one of the most beautiful cities in Europe. Many people thought it was most attractive in winter, when clad in snow. Then a general view of the city, over the river on which it stands, over a multitude of steep, white roofs, to the Castle of Prague, on its rocky hill, was something not to be forgotten.

If one should go about inside the city, he would find that it is a combination of things very old and things very new. A quiet old canal serves as a street in one part of the city. Quaint buildings on its banks recall the life of days long past. Elsewhere, very modern buildings face wide streets that were throbbing, before the war, with the life of a new country.

There are many reasons why Prague, with a population of more than 900,000, is the largest city of Czechoslovakia. Of course, the fact that it is the capital helped its growth. It is not near the centre of the country, but it is near the centre of Bohemia, richest and most progressive part of the country. It is a busy river port, on a branch of the Elbe River. It is the leading railroad centre. It is near coal fields. It is the leading manufacturing centre, with industries of many kinds.

Another city. At a point on the Danube River, Czechoslovakia, Austria, and Hungary come together. The Slovak city of Bratislava, Figure 60, is near the point where the three countries meet. The picture in Figure 218 shows part of Bratislava's water front. The bridge across the swift-flowing river connects Czechoslovakia with Hungary. Before World War II, much freight moved by river between Bratislava and Austria, Hungary, Yugoslavia, and Rumania. Sizable ships came all the way up the river from the Black Sea to the city.

Czechoslovakia has spent large sums on improvements at Bratislava. New docks, warehouses, and facilities for handling freight have been built. Though chiefly a commercial city, Bratislava has important industries. They are based largely on timber, mineral, and agricultural resources to the north. Industry and commerce help each other.

As a port in international trade, Prague looks northward—down the Elbe. Bratislava looks the other way—down the Danube. A canal is planned to connect the two rivers. If it is built, both cities will look both ways by water. More than ever, Czechoslovakia will be “in the middle” (p. 270).

Among the Slovaks. Most of the Slovaks live in the foothills of the Carpathian Mountains and in valleys leading southward from the mountains. This region, called Slovakia, is a rugged land of farms, pastures, forests, and streams. The lower, more open areas are near the southern boundary of the country (Fig. 60).

There is some mining in Slovakia, chiefly of iron ore. There are industries, too, such as flour-milling and distilling. Most Slovaks are farmers, shepherds, or lumbermen. Bratislava, in the southwestern corner of Slovakia, is the only large city. Villages, rather than cities and towns, are the rule.

Figure 219 shows a little Slovak village, and the surrounding fields, pastures, and patches of woodland. The log houses are whitewashed and roofed with thatch. Some have a stable at one end. Some have no chimneys.

A family in such a village may manage to keep two cows, and perhaps a horse. Almost certainly, it has one or more pigs and some geese. It may have only two or three acres for hay, and only a few more acres for rye, potatoes, vegetables, and other crops. The land may be poor. In winter, the men of the village may cut timber in some forest. Once a year, a family may sell one or two calves, a pig, and some geese. The women may make embroidery to sell.

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Figure 218. On the water front of the largest Slovak city

© Ewing Galloway





Figure 219. A country scene in Slovakia

Their hands tied. Unfortunately the Czechoslovak people are not now free to work and live as they might wish. Czechoslovakia is one of the countries of eastern Europe on which Russia has brought very heavy pressure. How much the present Communist government has changed the ways of farm and city life is not known to the outside world.

The road ahead for Czechoslovakia is uncertain. If left to themselves, the people would continue to improve their ways of living.

Helps in Learning

1. Which part of Czechoslovakia, do you think, is settled most densely? Why? Check your answer from Figure 66.
2. Do you think Prague is the best place for the capital of Czechoslovakia? Why?
3. Explain what is meant by the statement, "Their hands are tied." You may wish to refer again to page 261.

4. Explain the statement that "industry and commerce help each other."

5. In Bratislava, street signs and public notices are in three languages. Can you explain this? If so, how?

6. Name all the differences between Poland and Czechoslovakia that you can.

Austria

The country and its capital. Figure 60 shows at a glance several important things about Austria. The country is small. Most of it is mountainous. It has one huge city. This city is Vienna, the capital, near the northeastern corner of the country.

Many places in the mountains of Austria look much like the places shown in Figures 220, 221, and 222. The first place is farthest west, between Austria and Switzerland. The others are well inside western Austria. Farther east, the mountain ridges are lower, in general, and the mountain valleys are



Figure 220. In the Alps

broad. Only about one-fifth of the land in Austria is outside the mountains.

It may seem surprising that the population of Austria, so small and so largely mountainous, is seven million. It certainly is surprising that nearly two million of the people, more than one-fourth of them, lived in one city—Vienna—before World War II. The explanation is found in the earlier story of the country and the city.

From riches to poverty. Before World War I, Austria was at the head of an empire called Austria-Hungary. This empire was shaped somewhat like the province of Ontario, and was about half the size of Ontario. Its population was more than 50 million. It had valuable mineral deposits, fertile farm lands, many industries, and much trade. It was big, rich, and strong.

Vienna tied together all parts of the empire. The city had grown up where natural

land routes and river routes met (Fig. 6o). It was connected by roads and railroads with all parts of the country, and with other countries on all sides. It was right between the main industrial and agricultural areas of Austria-Hungary. Its trade helped it to develop manufacturing. It was the Austrian capital, and the largest city in all the empire. Finally, Vienna was famous throughout the world as a leading centre of music and art, of science and education. It was both large and great.

In spite of its strength in many ways, Austria-Hungary had a fatal weakness. It contained many peoples, with different languages, manners, customs, and different ideals. These people never were welded into one united nation. They were not even friendly neighbors. Often, they were ruled harshly.

The end came for Austria-Hungary in



Figure 221. Springtime in the Austrian Alps

© G. D. Hackett

World War I. All of Czechoslovakia and all of Hungary were lost. Czechoslovakia got most of the mineral wealth and most of the industries of the old empire. Hungary got the best farm lands. In addition, large areas were lost to Poland, Rumania, and Yugoslavia, and a small area to Italy. Austria, peopled by Germans, was left alone, small and weak. It still had Vienna, but the city was too large for the little country. The two did not fit.

Many Austrians wanted to join Germany after the old empire fell apart. They thought Austria could not live alone. This union was not allowed. Other countries feared it would make Germany too strong for their safety. Austria got along as best it could.

In 1938, Austria was seized by Hitler and made a province of Germany. In World War II it was liberated by the Allies. It was not set free immediately. Like Germany, it was divided into four occupation zones—British, French, American, and Russian. Of course,

the Austrian people wanted to get back control of all their land and resources as soon as possible. As we saw (p. 261), Austria regained its freedom in 1955.

Resources and work. One of the chief resources of Austria is the beautiful scenery in its mountains, as suggested by the pictures. The business of entertaining tourists once was important. Doubtless this business will revive in time.

The lower mountain slopes are covered with forests, mostly of pine, fir, and larch. Forest conservation has been practised for a very long time. The care and use of the forests should give work to many people in the future.

A large amount of water power can be developed on the mountain streams. There has been need for it since the coal deposits of the old empire were lost to Czechoslovakia and Poland.

More people depend on farming than on any other kind of work, even in the mountains.

The floors of the mountain valleys are covered with small farms. The farmers grow rye, oats, hay, vegetables, and a few other crops. Their cattle graze in summer on the mountain slopes. The best farm lands are outside the mountains, in the larger valleys near the northern and eastern borders of the country (Fig. 6o). All the common grains and vegetables are grown on these lands. Near Vienna there are many truck farms and fruit farms. In both the mountains and the valley plains there are many small towns and villages.

Since the partition of the old empire, Austria has tried hard to develop manufacturing. Though poor in minerals, it has deposits of iron ore on which a group of iron and metal-working industries is based. The forests support furniture and paper industries. Textiles, clothing, and leather goods are made. The Austrians know they cannot organize mass production and compete with the big industrial countries in world markets. They plan to make special goods, instruments, and tools that may be in wide demand. Much will be needed in many ways to make Austria a prosperous land.

Helps in Learning

1. What things in Figure 220 are related to differences in the *slope* of the land? To differences in the *height* of the land?
2. What do you think of the farming methods shown in Figures 221 and 222? Explain your opinion. Is the growing season in these mountain valleys long, or short? Why?
3. Tell how Vienna, once the leading city of a big, rich country, came to be in a small, poor country.
4. What is the most striking difference between Austria and Hungary that is shown by the map in Figure 6o? In what ways, if any, does the map show that Austria and Hungary are alike?
5. What are some of the special problems that Austria is facing? How are the Austrians

hoping to solve them? What, do you think, hinders progress?

Hungary

As we have seen, the key words in a description of Austria are *Vienna* and *mountains*. For Hungary, the key words are *Budapest* and *plains*. Budapest had well over a million people in 1939, before World War II, but was not nearly as large as Vienna (p. 275). It had a smaller part of the total population of its country, too, which was then nine million.

Before and after. The Hungarians were very proud of Budapest before the war. It was a city of fine appearance, as one may see from Figure 223. It had been formed, some 80 years ago, by uniting Buda and Pest, cities that faced each other from opposite banks of the Danube.

Figure 222. Summer time in the Austrian Alps

© Max Pohly, from *Black Star*



Buda was on hilly land on the west side of the Danube—the left-hand side in the picture. In it were most of the government buildings, and most of the more attractive homes. It was the administrative heart of Hungary. On the wooded hills behind the city there were many pleasant suburban homes.

Pest was on flat land on the east side of the Danube—the right-hand side in the picture. Fashionable hotels and cafés fronted the river. Behind them was the main business section. Behind the business section, in turn, was the industrial section, reaching out in suburbs to the edge of the open plain. In this section of the city there were flour mills, breweries, distilleries, leather factories, and iron works, surrounded by the cottages of workmen. Pest was the commercial and industrial heart of Hungary. It was, indeed, the only large centre of commerce and industry in the entire country.

That was Budapest before the war started. Before the war ended, it was a vast heap of ruins. Hungary had sided with Germany. The day came when Russian armies, driving westward, reached Budapest. The Germans, seeking time to build new defences in Germany itself, held the city as long as possible. There was bitter fighting, street by street, house by house. People lurked in cellars as they waited for the end—without heat or light, with little food or even water. Repairing the damage caused by World War II has been hard work. Gradually, however, Budapest has again taken its place as a big, busy city.

The great plains. The part of Hungary west of the Danube is a rolling plain, crossed by ranges of wooded hills. Most of the part of the country that lies east of the river is a nearly level plain, as smooth as the land in Figures 224 and 225. It was covered originally with grass.

Numerous streams cross the eastern plain in winding channels. The larger ones rise in the mountains north and east of Hungary. Usually these streams are shallow and slug-

gish, but flood waters pour down them when the mountain snows melt in spring. Time and again, they have flooded great areas, causing heavy losses. Hundreds of miles of dikes have been built to protect the land along some of the streams. More dikes are needed.

The surface in this part of the country slopes so little that most of the water from local rains and snows soaks into the ground. Many places are marshy, even though the precipitation is light (Fig. 58). Water may be found at some depth almost anywhere, by digging a well.

The rainfall in the east is not only light, but also variable and uncertain. Fortunately, most of it comes in spring and early summer, when needed by crops, but droughts are common. The light rainfall and poor drainage favor grass, of course, not forests. That is why the eastern plain is grassland, or steppe land.

If the headwaters of the larger rivers that cross the eastern plain were inside the country, much could be done to prevent floods and to reduce the damages of drought. High dams could be built upstream to store the waters from melting snows, and later pass them along in safety. Low dams could be built downstream to turn into irrigation canals the waters released from storage.

To many people the eastern plain of Hungary, without hills or forests or variety in scenery, seems unattractive and monotonous. The Magyars who live there love it, however, as sailors love the sea.

The Magyars. The name of Hungary in its own language is Magyarország. This means Magyarland—the land of the Magyars. The early ancestors of the Magyars were nomads from grasslands in Asia. They had come westward by stages, pushed onward, from time to time by other nomads. More than a thousand years ago they reached Hungary. They lived at first in tents, and moved about with their flocks and herds. They found good pasturage easily. In time, they gave up



Figure 223. Twin cities on the Danube—Buda and Pest

their old nomadic life. They built villages, and became farmers. Most Magyars live today in villages, and most of them make a living by farming.

Villages and towns. A short description of one of the Magyar villages will serve for all of them. They are much alike. There are no stores or shops in the village, but it has a school and a church. In an open space at the centre of the village there is a big pond for geese and ducks. The streets, three or four in number, are dusty or muddy according to the weather. The village has a new well. It is deep, and the water is good. The old village well was shallow, and poorly lined with rough stones. The water from it was impure. Even the new well does not have a pump. Water is raised in a big bucket.

The houses have only one story, with a loft under the roof. Most of them are built of sun-dried brick, and are whitewashed. They face their own courtyards, with one end to the street. At the back there are some stables and pens for horses, cows, and pigs.

Outside the village there is a public grazing area, where one or more men tend by day all the stock, except, of course, draft animals at work. Here there is another well, and a watering trough. All around for miles are the fields on which the villagers depend for a living. The towns are little more than big villages.

The real centre of each town is the market place. Once a week it is crowded. People come from villages ten, fifteen, or more miles away, bringing grain, vegetables, geese,



Figure 224. Grain fields in eastern Hungary

© Boury, from *Three Lions*

Figure 225. Grasslands in eastern Hungary

© Boury, from *Three Lions*



or something else to sell. The shopkeepers of the town spread out cloth, tools, household goods, and other things. Trade is brisk. Meanwhile, little or no business goes on inside the shops. People from the villages enter them rarely, if ever.

Life is simple in the villages and towns. For many of the people it is also hard, even in times of peace. Many of them own farms too small to yield a good living. Many own no land at all, and often find it difficult to get enough work as farm hands. At the other extreme, there are some people who owned vast estates before the war. Nearly one-third of Hungary was in the hands of great landowners, many of whom lived in Budapest.

Products of the land. The picture in Figure 224 was taken on a big estate, judging by the size of the field, the large barns at the left, and the number of workers. The crop is wheat, one of the leading crops of Hungary. The time is July. Doubtless there were other big fields near-by in which corn was then growing. Corn is another important crop of Hungary. Most of it is used for fodder.

Much rye and barley also are grown. The rye is used chiefly for bread, the barley for brewing. There are other crops, of course, among them sugar beets and tobacco. Fruits were gaining in importance before the war. Vineyards are scattered throughout the country. Some of the larger ones are west of the Danube, on the sunny southern slopes of hills.

Most Hungarian farmers raise some stock, but much less land is used for herding cattle, sheep, and horses than formerly. Even so, scenes like that in Figure 225 were not uncommon in some areas before the war. How much the Communists have changed life in village, town, and country is not known outside Hungary.

Helps in Learning

1. Before World War II, the Hungarian government was trying to increase manufacturing.

What reasons can you give for this effort? (Before answering, recall what you read about Austria-Hungary, page 275.) Do you think that manufacturing in Hungary will ever be as important as farming? Why, or why not?

2. Five kinds of manufacturing carried on in Budapest before the war were named on page 278. Which of them, do you think, depended on farming in Hungary?

3. Many trees have been planted as windbreaks in Hungary. Do you think they are needed more west of the Danube River, or east of it? Why do you think that is the case?

4. How does the harvest scene in Figure 224 differ from a harvest scene on the prairies of Manitoba or Saskatchewan?

Rumania

Land and people. Rumania is a land of mountains, foothills, and plains (Fig. 60). The larger plains are on the borders of the country. They nearly surround the central highlands—the core of the country.

The boundaries of Rumania have been changed repeatedly. At times, the country has been much smaller than now; at other times, much larger. Many people from other countries, among them Germans, Magyars, Bulgarians, and Russians, live in Rumania. The village in Figure 226 is a German village. The founders of the village came to Rumania from the Rhine Valley several centuries ago. Most colonists or descendants of colonists live in places near the borders of the country.

Invading armies, as well as peaceful settlers, have come from other lands. The southern plain of Rumania has been a highway since very early times for armies moving into Europe from the East. The western plain has also been open to attack. The central mountains have served at various times as a refuge for Rumanians when the lowlands were overrun by invaders. They have been a national fortress.

The population of Rumania in 1939 was



Figure 226. A German village in Rumania

nearly 20 million. It is less now, because in World War II Rumania lost a large area in the east to Russia (Fig. 83). About three-fourths of the people of the country today are Rumanians.

Country life. The Rumanians are a hardy, but backward, people. Nearly four-fifths of them live by farming. Most of them have only small patches of land. They use old methods. Little fertilizer is put on the land. Wooden plows are common. Grain is cut by hand. Crop yields are low. Most houses are small, and poorly built. In the plains, the common building material is sun-dried brick. In the hills and mountains, many buildings are made of wood or stone. Many of the vil-

lages are shabby. The main food of the Rumanian peasants is *mamaliga*, made from corn. They eat little meat, and drink little milk.

On the whole, the Rumanians are a poor people, a poor people in a land of natural wealth. They have been taxed heavily, and often ruled harshly. They have been unable to get the seeds, implements, and other things necessary for good farming and a good living.

Probably the best farmers in Rumania are Germans. The well-kept orchards and vineyards in Figure 226, together with the sturdy, neat houses, suggest German skill and thrift. Some of the Bulgarians in the southwestern

part of the country are skilful market gardeners and fruit growers. Conditions vary from place to place, of course, not only with the people but also with the land itself. Figure 227 shows a good area in the hilly country between plains and mountains. Most of the slopes in sight are gentle, and covered with good soil.

Crops. Corn and wheat are the main crops almost everywhere. In some sections, barley, rye, and oats are grown. All these are old crops in Rumania. New crops are flax, cotton, soybeans, and sugar beets. In the belt of foothills, there are many vineyards and many orchards, especially apple and plum orchards. The national drink, called *tuica*, is brewed from plum juice.

Livestock. There are not as many farm animals in Rumania as might be expected. In general, the cattle are rather poor. Many cows are used as work animals. Most important are sheep. Cheese is made from sheep's milk. Wool and sheepskin are used in making clothing.

From many villages in the plains and hills, sheep are driven to mountain pastures in spring, when the snows melt. The higher pastures are above the limit of forest growth. Shepherds and cheese makers spend the summer there with the flocks. Twice during the summer the sheep are sheared. At the end of August the homeward trip from the highest pastures begins. At the end of the journey, the sheep are put into pastures or fields of stubble.

Cities and industries. Life in the villages of Rumania is part of the farm life of the country. Before World War II, life in the cities was based chiefly on industry and trade. Bucharest and Ploesti, Figure 60, have special interest.

Bucharest, with more than a million people, is the largest city. It is the capital, the railroad hub, and the leading industrial and commercial centre of the country. Among its many kinds of industrial plants, before the war, were flour mills, meat-packing houses, chemical works, and textile factories. All the

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Figure 227. Calling the workers from the fields

© Monkmeyer



leading commercial firms and banks of Rumania had their main offices in the city. Foreign companies did much to develop the industries and commerce of Bucharest and of other Rumanian cities.

The centre of Bucharest, with very modern buildings, broad streets, and shady boulevards, suggests the Western World. The people there like to think it resembles Paris. But there are parts of the city where the buildings, the narrow, crowded streets, and the peddlers, crying their wares, suggest the Eastern World.

Ploesti is near the centre of the rich oil fields of Rumania. They were developed largely by British and American companies.

Figure 228. In the Rumanian oil fields © Monkmeier



The big oil refineries and the storage tanks were thoroughly modern. A picture like that in Figure 228, taken before the war, could have been taken in our own country. All around Ploesti is hilly, wooded country, dotted with farms and villages.

Pipelines run from the oil fields to Constantza (Fig. 60), on the Black Sea, and to a port on the Danube south of Bucharest. For years, the Rumanian government got much of its income from oil.

During World War II, Germany depended heavily on Rumania for natural oil. The wells and refineries at Ploesti were bombed repeatedly by American and Russian fliers. After the war, the Rumanian government took control of the fields and restored production.

The great river. The Danube River reaches the sea through Rumania (Fig. 60). In its long course from southern Germany it flows in or along eight countries.

Figures 223 and 229 both show that the Danube is a large river. The second picture was taken near the famous Iron Gate (Fig. 60), a narrow gorge where the current of the river is very swift and the natural channel shallow. To help shipping, a deeper channel was blasted in the bed of the river, and a railroad was built alongside. Locomotives tow the boats upstream through the rapids. In most places, the river is not hard to navigate.

The value of the Danube as a highway has been great. For example, grain from all the down-river countries and oil from Rumania have moved upstream. Much grain also has moved downstream, especially in Rumania, to be transferred to ships at ports near the head of the delta. Manufactured goods have moved downstream from Germany and Bohemia to the agricultural countries below. Before World War II, the tugs and barges and steamers on the river carried the flags of a dozen countries. The river means much to all the countries commonly concerned in its trade. To Rumania, it has vital importance.



Figure 229. Near the famous Iron Gate

© James Sawders

During the war, the Danube fell under the control of Germany. After the war, most of it was controlled by Russia (p. 106). In 1953, Yugoslavia, no longer a satellite of Russia (p. 261), and Rumania agreed upon the free navigation of the Iron Gate section of the river. Sometime the great river doubtless will be open again, throughout its length, on equal terms to all. Meanwhile, the world still wonders just what Russia wants in Rumania. This much is certain. The Communist rulers of Rumania have been busy remaking the life of the country in imitation of Russia.

Helps in Learning

1. How does the surface of Rumania (Fig. 60) help to explain the general distribution of its population (Fig. 66)?

2. Suppose the Danube River, instead of flowing to the Black Sea, flowed south to the Aegean Sea. Do you think in that case the river would have greater value, or less value, as an international highway? Give reasons for your answer.

3. In some ways, Rumania is "a land of contrasts." Explain this statement.

4. Suppose you were to give to your classmates a brief talk on "Life in Rumania." What are the things that you would emphasize in your talk?

Bulgaria

A Balkan country. Bulgaria, Figure 60, is another land of contrasts. Mountains and hills, where shepherds tend their flocks, overlook plains and valleys, where farmers work their small fields around villages and towns



Figure 230. A town in southwestern Bulgaria

© Schalek, from *Three Lions*

(Fig. 230). Some valleys are known for special crops. Figure 231 gives an example. It is a scene in the "Valley of Roses." The contrast between the landscapes in the two pictures is striking.

The mountains and larger plains of Bulgaria run, in general, east and west. The main mountains, the Balkans (Fig. 60), reach from end to end of the country. The word "Balkans" means mountains. Balkan Peninsula is the name of the entire area between the Black Sea and the Adriatic Sea. All the countries of this big peninsula are mountainous. Balkan countries and Balkan peoples are terms that explain themselves.

A crossroads country. Bulgaria also is another crossroads country. The lowland north of the Balkans slopes to the Danube River.

It is part of the historic route of migration and conquest from the East that was mentioned in connection with Rumania (p. 281). The lowland south of the middle Balkans is part of another historic route, one leading northwest from the Bosphorus into central Europe. This line is followed by the main railroad from Istanbul to Vienna. It is the route of the famous Orient Express. The railroad is shown on the map in Figure 60.

As we have seen in other cases, such as that of Belgium (p. 205), a crossroads location may mean dangers as well as opportunities. That has been true with Bulgaria. Many times, the country has been a battlefield. As a result of wars, there have been many changes in its boundaries. Today it is tied closely to Russia.



Figure 231. The harvest of roses

© Three Lions

A Black Sea country. Bulgaria naturally faces eastward. The Danube flows that way, along the northern boundary of the country. Two railroads, one on either side of the Balkans, run eastward to ports on the shore of the Black Sea.

These water outlets from Bulgaria are hardly satisfactory. The Danube, changing its course, reaches the sea in Rumania. The Bulgarian ports, though improved somewhat by breakwaters and harbor works, are not first class. Most of all, the use of the Black Sea for trade with any country farther west means a wide detour by way of the Bosphorus, through Turkish territory. It is easy to understand why Bulgaria has wanted to regain the frontage it once had on the Aegean Sea, now part of Greece.

A country of peasant farmers. More than four-fifths of the seven million people in Bulgaria make their living by farming and raising livestock. Most of the farms are very small, especially those close to villages. Many contain only one to six acres. The villages are the centres of peasant life. There are few, if any, scattered farmsteads. Each village has its common pasture, and almost every farmer has a few sheep and pigs, a cow or two, and a pair of oxen.

The peasants of Bulgaria are careful, hard-working farmers, even though most of them use old-fashioned tools and methods. Wooden plows, pulled by oxen, are common. Modern machinery is rare. Most farmers are too poor to have it. Most fields are too small to use it.



Figure 232. A humble home

© Ewing Galloway

Wheat, corn, barley, and rye have been the leading grain crops, in that order. Moist valley-bottom land may be used for corn, and higher, drier land for other grain. These four crops occupy most of the farm land north of the Balkans. They are grown also south of the mountains, but there other crops share more of the land. Big crops of high-grade tobacco are grown on the lowland between the Balkans and the mountains in the southwest (Fig. 6o). The town in the picture in Figure 230 is at the edge of the southwestern mountains. It uses local tobacco in making cigarettes.

In some places there are mulberry trees, supporting a silkworm industry. In many places there are orchards and vineyards. The most unusual kind of farming in Bulgaria is rose farming.

Tons and tons of roses. Just south of the middle Balkans, and separated from the lowland of central Bulgaria by a line of hills, lies the famous Valley of Roses (p. 286). It is a sheltered valley in which amazing quantities of roses were grown each year when the world had peace to enjoy luxuries. A very valuable oil, known as attar of roses, was distilled from the rose petals. It was used in many choice perfumes. Most of the world's supply of attar of roses came from this valley.

A field of roses must be plowed six or eight times a year, and hoed as often. Young bushes must be covered with dirt in winter, even though the Balkans give protection against cold winds from the north. The bushes must be trimmed. They must be kept well fertilized. There is much work to do.

The climax comes at harvest time, and then everyone helps.

The harvest picture in Figure 231 was taken just outside the main town in the Valley of Roses. It was late May or early June. Women and children always do most of the picking. They begin very early in the morning, and work till noon. There is most oil in the petals on cool, still mornings, when the flowers are damp with dew and there is much moisture in the air. While the women in the picture picked the roses, men collected the baskets as they were filled and took the petals into town. There the petals were sold by weight to a distilling company. It takes 200 or more pounds of petals to yield one ounce of distilled attar. No wonder attar of roses is a luxury.

Few industries. Bulgaria has few industries of much size. It has tried to increase manufacturing, but with little success. There are sawmills on some mountain streams, near stands of timber. There are flour mills in grain-growing areas. There also are tanneries, breweries, tobacco factories, and textile mills. The country is rich in coal, and has deposits of manganese ore, chromium, and other minerals. But mining, like manufacturing, has developed slowly. Both may later gain together.

Cheap, machine-made goods have been imported, in exchange for farm products. Still, the peasants themselves make in their homes many of the things they use. Homespun cloth and homemade clothing, furniture, and tools are common. Many of the people of this Balkan country, like the family in Figure 232, must live with few comforts or conveniences.

Few cities. Bulgaria also has few cities. Sofia, the capital (Fig. 6o), is the largest city. It is in a key position on natural routes followed by roads and railroads. The place was important in Roman days, and even earlier. In the modern part of the city there are some broad and attractive avenues. There

are also some handsome public buildings. In Sofia and the surrounding suburbs there are factories of almost every kind found in the country.

Helps in Learning

1. Do you think the yearly rainfall around the town in Figure 230 is heavy, or light? Why do you think so?

2. The first four side headings in this story of Bulgaria tell four important things about the country. What are they? Check your memory. What did you learn under each of these side headings?

3. Tell a story that connects some women in Bulgaria with some women in countries like Canada.

Yugoslavia

Variety. There is great variety in Yugoslavia—in surface, climate, resources, and ways of life. A traveller through the country meets with varied scenes, such as those suggested by Figures 233, 234, and 235.

There are high mountains, and broad plains (Fig. 6o); rushing torrents, and lazy rivers; warm lands, and cold lands; treeless areas, and dense forests; waste lands, and rich farm lands; crowded districts, and empty spaces. Yugoslavia is one of the most varied countries in all Europe. It can mean many different things to different people. A look at several parts of the country will make this clear.

Along the Adriatic. Figure 233 is a scene on the Yugoslav Riviera. This coast has been called a fairyland, and “a happy hunting ground for tourists.” Historic towns hug the shores of sheltered bays. Cypressess and palms, together with bushes and plants of many kinds, add much to the picture made by blue waters and white buildings. A chain of great, bare mountains stands behind the coast, and shuts much of it off from the interior of the country.





Figure 234. Outdoor life in Bitolj

© Dorothy Hosmer

The town in the picture on the opposite page, Ragusa (Fig. 60), once had a busy trade. That was before the discovery of new sea routes caused Mediterranean shipping to decline (p. 16). Ragusa is still a fishing port. Sardine fishing is most important. The fishermen work at night. Powerful lamps on the bows of the fishing boats throw shafts of light into the water. When the fish, attracted by the streaks of light, gather over the sagging nets between the boats, the nets and their loads of fish are hauled in.

A trouble spot. A few years ago the eyes of the world were on a city at the *head* of the Adriatic Sea. That city is Trieste (Fig. 60). In 1918, at the end of World War I, Trieste

was ceded to Italy by Austria. It had been the main seaport of Austria-Hungary. Most of the people of the city now are Italians. Most of the country people roundabout are Yugoslavs. Each country has another seaport nearby. Trieste is not vital to either. It is, however, the natural Adriatic outlet for all of middle Europe.

At the end of World War II, Yugoslavia, backed by Russia, claimed Trieste. Britain and the United States opposed the claim. If Trieste had gone to Yugoslavia, it would really have gone under Russian control, for Yugoslavia was then under strong Russian influence. It was finally agreed to set up a "Free Territory of Trieste." This step was



Figure 235. Making charcoal

© James Sawders

taken only for want of a better solution. In 1953, Britain and the United States announced they would soon withdraw the troops they had kept in Trieste to maintain law and order. Then the old dispute between Italy and Yugoslavia flared anew. Rival claims filled the air. Serious riots took place in Trieste. The dispute, as we saw (p. 234), was finally settled in 1954.

In the southeastern corner. The picture in Figure 234 was taken in the city of Bitolj, in the southeastern corner of Yugoslavia. Bitolj is west of the Vardar River, near the boundary of Greece (Fig. 6o). The women in the foreground, at the right, are doing dishes, and preparing dinner in the street. They visit as they work. Children are playing on the other side of the street. The mosque in the rear and the tall minaret were built when Turkey ruled the land. It was October, a pleasant time to be outdoors. In summer it is hot, and when the burning sun is high everyone who can stays indoors.

Unfortunately, peaceful scenes like that in Figure 234 were not the rule in this corner of Yugoslavia after World War II. There was fighting between armed bands of men (guerrillas) along the border on both sides of the boundary with Greece. The Vardar River flows southward from this part of Yugoslavia, through Greece, to the Aegean Sea (Fig. 6o). Doubtless Yugoslavia wished to control the river to its mouth, and have the important port of Salonika. For a time, Greece was threatened by both Yugoslavia and Bulgaria (p. 286).

The farmers in the valleys of southeastern Yugoslavia grow wheat, tobacco, and rice. They have mulberry trees and vineyards. Political troubles have delayed their progress.

High in the central mountains. From a town in one of the valleys heading in the central mountains, one may climb in summer a steep, winding path to high pasture lands. Here and there a shepherd's hut and a pen for sheep stand side by side. The pen is

surrounded by a high fence made by setting pointed stakes in the ground. Every night the sheep are put in their pen, to protect them from prowling wolves. The sheep are watched carefully while they graze during the day, perhaps by boys who are directed by a head shepherd. From time to time during the summer the sheep are shifted to fresh grazing grounds.

The permanent home of a shepherd is in some village tucked away in a mountain valley. A dozen or so log huts may form the village. The back of each hut probably rests on the ground, while the front, away from the steep slope, rests on stout props. The space beneath, when enclosed, makes a night shed for sheep in winter. In such a village there is no store, and trips to the nearest town are infrequent. The mountaineers live simply, in a little world of their own. They know little about the outside world.

The northern lowlands. The plains of northern Yugoslavia are among the most fertile lowlands in Europe. They are like the great plains of Hungary. They have the best farms, the densest population, the largest number of towns, the thickest railroad net. Corn and wheat are the leading crops. Barley, oats, rye, and potatoes rank next. Some land is used for sugar beets and tobacco. Various fruits are grown, especially plums, apples, and pears. There are many vineyards. Cattle, hogs, and horses are raised by almost all farmers.

Belgrade (Fig. 6o), the capital and largest city, is in the northern lowlands. It stands at the junction of the Danube River and one of its navigable tributaries. Before the war, Belgrade was an attractive city—partly new, partly old. There were some sections with very old, quaint houses on narrow, cobbled streets. During the war, the city was partly destroyed by German airmen.

Industries and resources. Yugoslavia, like the other Balkan countries, tried hard before the war to develop manufacturing. As in

the other countries, the results were disappointing. Most of the industries were small and backward.

Yugoslavia has natural advantages for manufacturing. It has large stands of timber—mostly fir, oak, and beech. But the forests lack care, and much timber is used wastefully. Wood is used in making charcoal, as in Figure 235, when coal would better serve the need. There are deposits of coal, iron, copper, lead, zinc, and gold. The central mountains are rich in metals. But mining lags. There is much water power, but little is used.

There should be a good home market for manufactured goods, for the population of the country is about 16 million. But most of the people are poor. They cannot buy much. At the same time, the manufacturers lack money for large undertakings. In much of the country, the means of transportation are poor.

Political unrest makes progress difficult. Yugoslavia has much to hope for, however, and much to work for. The escape it made from Russian influence should help.

Helps in Learning

1. What can you say now to explain the statement that "there is great variety in Yugoslavia"?
2. Explain the general distribution of people in Yugoslavia, as shown on the map in Figure 66. Figure 6o will help you.
3. Trieste has been called "a powder keg of Europe." Why has it been a danger spot?

Albania

Rugged and poor. Albania, Figure 6o, is the smallest and poorest of the Balkan countries. Rugged mountains cover much of it. Many mountain villages can be reached only by rough trails. There is no railroad system. Parts of the coast are fringed by marshy, malarial lowlands.

The winters in Albania are rainy, the sum-



Figure 236. A sheep market in Albania

mers hot and dry. Farming calls for irrigation, but there is not very much of it. Many streams are dry when water is needed. Only about one-eighth of the land is cultivated. The crops of wheat, barley, corn, and tobacco usually are poor. The summer pastures are thin, and suited best to sheep and goats. Life is not easy in Albania.

A sheep market. Figure 236 is a scene in the sheep market at the main town on the coast of Albania. This town is west of Tirana, the capital (Fig. 60). The sheep were driven down to the port, and doubtless were exported to Italy. Most Italian boats leaving the port before the war carried some sheep. Sometimes sheep were sheared just before they were shipped to be slaughtered, the wool being sold separately. The wool then was made up into coarse, heavy cloth. The sheep

could walk to the coast—part way to market—and could carry the wool on their backs. These are advantages in a mountainous country with few roads, where back from the coast pack-animal transportation is the common kind.

The sheep in the picture are in small groups. Those in each group probably belonged to one man. Most Albanian shepherds have only a few sheep to sell at a time. As we have seen, Albania is a poor land.

The men in the picture are as interesting as the trade in sheep. Albanian shepherds wear clothes that show the influence of both East and West. The small, round cap, for example, is much like a Turkish fez. Many things in Albania naturally show Turkish influence, for Turkey ruled the country for five centuries.

Bad fortune. The long story of Albania has been a stormy one. Time and again, outsiders have held the land in bondage. Time and again, the Albanians have fought their enemies fiercely from their mountain retreats. So the story runs to its latest chapters, which tell of Albania as a battlefield in both world wars.

The position of Albania and the main routes across it have had much to do with its hard fate. Albania controls one side of the narrow strait which is the entrance to the Adriatic Sea (Fig. 6o). Albania might interfere, therefore, with shipping to and from Adriatic ports. That possibility has fixed jealous eyes upon it. Two natural routes lead across Albania from the coast. These routes have served as side doors into the Balkan Peninsula. They have been used repeatedly as highways of war. Albania is now the southernmost Soviet outpost in Europe.

If the Balkan countries and their neighbors bury their quarrels, the fortunes of all of them may improve greatly.

Helps in Learning

1. The description of the sheep market on the coast of Albania probably reminded you of earlier descriptions of markets in other countries. How many examples do you recall?

What were the principal things bought or sold in the different markets? Explain, as far as you can, why those particular things were bought or sold in each market.

2. Italy invaded and conquered Albania in the spring of 1939. Why do you think Italy wanted Albania?

3. As part of a peace treaty signed by the victorious Allies with Italy in 1947, Italy had to recognize Albania's independence.

Why do you think the Allies required Italy to do this?

4. There are both advantages and disadvantages in the *location* of each of the nine countries

described in this chapter. Name as many advantages and disadvantages as you can in the case of each of them. You will be helped by looking at the map in Figure 6o as you think about the matter, and you may need to look again at the descriptions of some of the countries.

5. What is the largest city in each of the nine countries described in this chapter (Fig. 6o)? What is true of all nine of the cities?

Three of these cities are on the same river. What ones are they? What is the name of the river?

6. Which of these nine countries contain mountains? Which do not? Check your answer by the map in Figure 6o. What do you find on the map in Figure 58 that suggests the position of the higher mountains in central Rumania? In western Austria?

How does the map in Figure 66 suggest the position of the higher mountains? How, in general, does life in the mountains differ from life in the neighboring plains?

7. List in two groups the nine countries described in this chapter. Put in the first group the countries in which you think the general level of living normally is low. Put in the second group those in which you think the level of living is normally comparatively high. Tell why you think each country belongs in the group where you put it.

8. In which of these nine countries is manufacturing important? Which ones, now without very important industries, have tried in recent years to develop more manufacturing? Do you think the outlook for manufacturing is good in any of them? If so, in which ones? Why do you think the outlook is good? Which ones have least opportunity for industrial growth? Why?

9. Greece was described in a chapter on three Mediterranean countries. Do you think it might have been described equally well in this chapter? Why, or why not?

10. As you read the first part of the next chapter, see whether or not you think Greece might have been considered equally well as one of the "bridge lands." Do not make up your mind without good reason.

BRIDGE LANDS

Peoples and Problems

Bridging three continents. The lands which are shown in black on the globe map below are called bridge lands. They form a kind of land bridge between Europe and southern Asia, between Africa and Asia, and between Europe and Africa. Long before the oceans became highways between the continents, caravans carried the silks and spices of the Orient over this land bridge to Europe (p. 9).

When we compare the globe map with Figure 5, we see that Egypt is the country farthest west in these bridge lands, and Afghanistan the one farthest east. Other countries in the group are Turkey, Syria, Lebanon, Israel, Jordan, Iraq, Iran, and Saudi Arabia. Sometimes the name Near East is used in referring to most or all of the area included in these bridge lands.

Figure 237. Bridge lands on the globe



Poor yet important. As one travels through the Near East, he may see little to suggest why this area has an enormous importance to the world. As a whole, these countries are lands of drought, dust, and desert (Fig. 107). Less than one acre out of a hundred can be used for farming. In many places, the ways of living are backward. Most of the people are poor.

These bridge lands are of great importance, however, for two reasons. One reason is their location at a world crossroads. They are crossed or bordered by some of the world's most important highways of trade and travel (pp. 15-16, 70).

The main water highway connecting Europe and southern Asia passes through the Mediterranean Sea, the Suez Canal, and the Red Sea (Fig. 14). The only water route leading to and from southern Russia passes through the narrow waterway joining the Black Sea and the Mediterranean (Figs. 12 and 86). All land travel between Europe and Africa, and between Asia and Africa, must cross the bridge lands. Almost all planes flying regularly between Europe and eastern Africa, or between Europe and southern Asia, stop at one airport or another in the Near East. Living in the bridge lands "is like living in the middle of a busy street."

The other reason for the importance of the bridge lands is their great oil resources (p. 18). In this region millions of barrels of oil are produced each year. It is thought that more than one-third of all the oil resources in the world may be in the Near East.

Who owns this oil? It belongs, of course, to the countries in which it is found. But

no one of these countries that has important oil resources also has the money, engineers, and machinery to develop them properly. Most of the countries, therefore, have sold rights to drill oil wells and to market oil products. Such rights are called concessions.

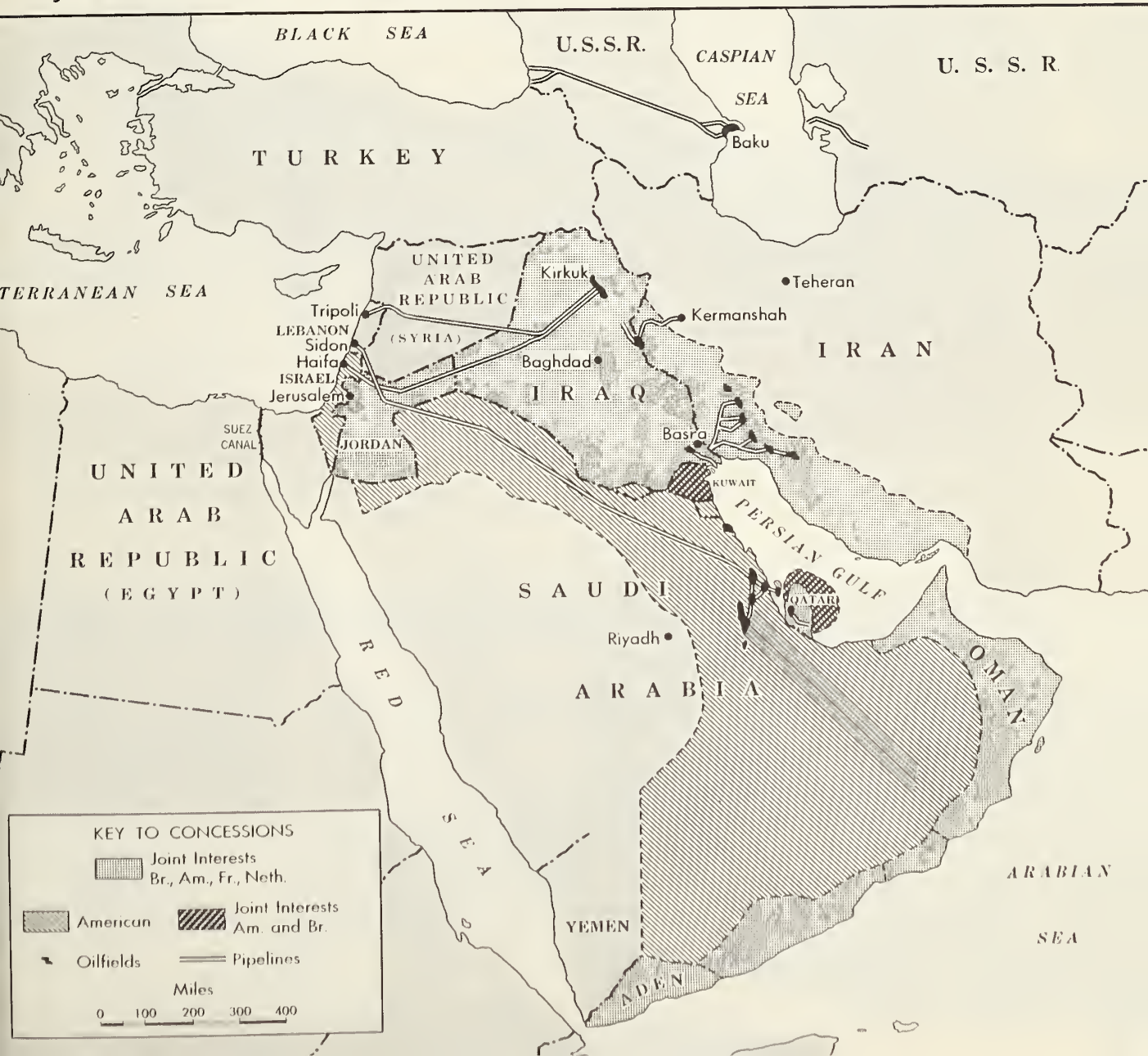
The map below shows where oil companies of various countries have concessions in the Near East. British and American companies have a big share. In most of Iraq, Aden, Oman, and Jordan, British companies share their interests with American, French, and

Netherlands companies. The concession for a large part of Arabia belongs entirely to Americans. British companies have oil concessions in Iran.

Rivalry. We might well expect strong rivalry in the bridge lands of the Near East. There probably is no other region in the world where the interests of so many countries come into such direct conflict. To Britain, the water highway through the Mediterranean is a life line (p. 70). To Russia, control of the gateway to the Black Sea

[297]

Figure 238. Oil concessions in the Near East



may seem equally important (p. 109). The ships of France and the Netherlands normally sail through the Mediterranean on their way to related lands in southeastern Asia. All these countries, as well as the United States, are greatly interested in the oil resources.

The world watches closely, therefore, what happens in the Near East. Much of the time, one country or another is trying to get some special advantage there. All of them cannot get all they want. The rivalry will continue until the interested nations agree to work together for the good of the people who live in the bridge lands, as well as for their own good. We shall read about the people of the Near East in the following stories.

Three ways of living. The pictures on the opposite page show three kinds of life which are common in these bridge lands today. The nomads (Fig. 239) live in tent homes and move frequently with their flocks, from pasture to pasture. The farm people (Fig. 240) live in permanent homes, and depend on their fields for a living. The people of the cities (Fig. 241) make a living from trade, government, and simple manufacturing.

In the Near East as a whole, more than half the people are farmers. The rest are divided about evenly between nomads and city dwellers. In any particular country, of course, a larger or a smaller part of the population may belong to any one of these three groups.

The land of the nomad. The rainfall map on page 128 shows that southwestern Asia, like northern Africa, is a land of little rain. The story of "What the desert is like," on pages 97 and 98, describes the Sahara in French Africa. It might be used to describe desert areas in the Near East also. There, as in the Sahara, desert lands differ greatly from place to place. Figure 239 shows a camp near a low, rocky ridge. Elsewhere, the desert may be level, or mountainous. It may be covered with gravel or sand or fertile soil.

With scarcely a word changed, the story of

"Desert people," page 98, might be used to describe how people live in the bridge-land deserts. In this desert region, too, life is hard and opportunities are few.

Each tent in Figure 239 is the home of one nomad family. The entire "tent village," with many related families, belongs to one clan. A group of clans makes up a tribe. Rarely do all the people of a large tribe meet in one place. It would be hard to find water and food in one place for their many herds of camels, sheep, or goats.

The picture on page 300 shows part of the simple life in a tent home. The young woman in the foreground is making bread. The dough is mixed in a large wooden or brass bowl. Then it is spread on the rounded iron platter which is over an open fire. Three stones support the platter. The finished bread is not in the shape of a loaf. It is more like a big, round, crisp pancake.

Each family owns its tent and the few furnishings in it—bowls, kettles, coffee pots, an iron platter, and a few carpets and pillows. A family may own also some of the animals in the herds. The pasture lands are the common property of the tribe. In this and other ways the people are bound together for protection and security. In time of need, it is the tribe that looks after the unfortunate.

Of the three groups—nomads, farmers, and city people—the nomads are affected least by the problems of crossroads and oil. From time to time, a nomad may see an automobile or a truck on some caravan trail. Nomads helped build the pipeline which crosses the desert from Kirkuk to the Mediterranean (Fig. 238). Geologists, exploring for oil, may hire nomadic tribesmen as guards or as guides. In most ways, however, the life of the nomad remains what it has been for thousands of years (p. 2).

Farming in bridge lands. In almost every place with water enough for crops, there are farmers rather than nomads. Most of the farmers live in irrigated oases, scattered across



Figure 239. In the desert



Figure 240. Near a farm village

Figure 241. In a small city





Figure 242. At home in the desert

the desert from Egypt to Afghanistan. Only in the low mountains at the eastern end of the Mediterranean Sea are there many farmers who can grow crops without irrigation.

The farmers shown in Figure 240 live in these mountains. There, both climate and crops are much like those of Spain, Italy, Greece, and the Tell (pp. 226 and 94-95). Winters are mild and moist. Summers are hot and dry. In Figure 240 the farmers are threshing wheat, harvested in the spring. This crop was grown with the help of winter rainfall, not by irrigation.

In some places, new methods of farming are practised, particularly in parts of Turkey and Israel. But most farmers in the bridge lands use simple wooden plows, sow grain by hand, cut it with hand sickles, and thresh it as men did hundreds, even thousands, of years ago (Fig. 240). In many places the soil gets poorer and poorer, year after year. Few of the farmers own the fields which they work. Partly for that reason, they take little care of the soil.

Some of the farmers in many oases own camels. The picture on the opposite page shows a so-called "water wheel," turned by a blindfolded camel. Beyond the stone wall, a chain of buckets hangs down into an open well. As the camel circles round and round, the buckets on the chain lift the precious water to the surface. The farmer who owns the camel probably would say that the camel is blindfolded to make it think it is on a long journey. Otherwise, the farmer believes, the camel would stop after one or two turns, seeing that it was going nowhere. Most of the camels used by the farmers are bought from desert nomads.

In most oases, the farmers can grow some crop at any season of the year. For food they may grow rice or corn, as well as wheat, barley, fruits, and vegetables. In Egypt, cotton has become a very important cash crop.

The Near East has two oases which are far larger than any in French Africa. They are two great river oases, one along the Nile in Egypt, the other along the Tigris and Eu-

phrates in Iraq (Fig. 5; p. 3). These oases are possible because large rivers flow from rain-catching mountains *across* the desert to the sea. In the desert itself, there is not nearly enough rainfall to support such big rivers.

The farm people in each of these two river oases may be counted, not only in hundreds, or in thousands, but in millions. About half of all the farmers in the Near East live along these great rivers.

Throughout the bridge lands, livestock are raised wherever there is farming. The farmers in Figure 240 use the lower slopes and the valley lands for growing crops. On the rocky upper slopes they herd sheep and goats. Farmers who live in an oasis may drive their herds a short distance into the desert when showers fall there and the grass grows quickly. At other times, the herds graze in irrigated fields. In mountain village and desert oasis alike, the herds supply food, wool, hides, and skins. Some of the animals furnish power for pulling plows.

In the farm villages. Bridge-land farmers live in villages instead of in isolated farmsteads. Often this has been important for protection, particularly in earlier times when the farmers were in danger of attack by desert herdsmen (p. 2). Even now, there are walls around many villages, although there is little danger of attack.

The ordinary village in the Near East, like the one in Figure 240, depends on a spring or a well for its water supply. If the houses were scattered widely, the water for most of them would have to be carried long distances. Only in certain places can a supply of water be had from springs or wells.

The village people work together in many ways. The farmers in Figure 240 thresh first the grain belonging to one man, then the grain belonging to another. The women of the village may use a community oven for baking bread. A night watchman is hired by the village as a whole. Where there is irrigation, the farmers must find ways to

agree about many things. How much water shall each farmer get? Which farmer shall get water first? Who shall clean the irrigation ditches, or dig new ones?

The village farmers are in a middle position—depending for some things upon the nomads; for other things, upon the city people. These groups, in turn, depend in many ways upon the farmers. From time to time, the nomads visit farm villages to trade with the merchants or farmers. In a village, a nomad may sell wool, hides, and skins. In return, he may buy a knife, a kettle, a clock, some fruits, vegetables, or grain for making bread. City people get food and other products from the farm villages. In exchange, the cities supply the farm villages with manufactured goods. Some of these goods are passed on to the nomads. The villages pass on to the city markets most of the products they get from the wandering nomadic herders.

Figure 243. A water wheel



Actually, this buying and selling is part of a vast and complicated system of world trade. Cloth for a nomad may come from Manchester, in Britain. The rugs on our floors may contain wool from Arabia. The kettle in a village home in the Near East may have come from any one of a dozen countries in different parts of the world.

In the cities. Figure 5 shows that there are few large cities in the Near East, an area about half as large as Canada. Only two cities, Cairo and Istanbul, are in the "more than 1,000,000" class. Only three cities, Alexandria, Teheran, and Baghdad are in the "500,000 to 1,000,000" group. Nevertheless, there are many city people in these bridge lands, for the area has many cities with fewer than 500,000 persons.

The city shown in Figure 241 is much like many other small cities in the Near East. It is Amman, capital of Jordan (Fig. 5). Amman lies in a narrow valley, where there is a good supply of water. As the city grew, it spread up the hillsides. In the picture, houses can be seen at several levels.

Amman lives largely from trade. Here caravan routes meet a highway and a railroad. To Amman come farmers from near-by villages. The markets are busy, day after day.

Workers in Amman make some of the things sold in the city. The picture on page 303 shows a carpenter shop. It suggests the simple industries found in Amman. The carpenter has just finished a wooden plow which will be sold to some farmer. Leaning against the wall is a yoke for a team of oxen. With simple hand tools, this workman can make only a few plows or yokes in a year. But he and other skilled workers have helped make Amman a centre of local trade.

Amman is a small city, with a small trading area of thinly settled lands at the edge of the desert. Other cities, for example Damascus and Baghdad (Fig. 5), are much larger. They draw trade from larger and richer lands. Their markets are bigger and

busier. Their factories may have power machinery. The products may be cloth or shoes, instead of plows and yokes for oxen. But in all the cities of the Near East people make a living from similar kinds of work—including trade, rather simple manufacturing, and, in some instances, government work.

Three of the largest five cities—Cairo, Alexandria, and Istanbul—are at world crossroads as well as at local crossroads. Because they are centres of world trade as well as of local trade, their trading territory extends far beyond the Near East. It is not surprising, then, that these cities have grown so large.

Life in all these bridge-land cities, whether large or small, probably differs from life on the farms as much as the farmer's life differs from that of the herdsman. As we have seen, however, the people in each group are important to those in the other groups.

Helps in Learning

1. Choose two important cities in western Europe. Choose two cities in southern or southeastern Asia. Show on the map in Figure 5 which route a person probably would follow in traveling from each European city to each Asiatic city which you chose. How does this explain the meaning of the words "bridge lands"?
2. Did the opening of the Suez Canal make the bridge lands more, or less, important? Why?
3. Why did the bridge-land countries sell oil concessions to foreigners?
4. Why are Russia and Britain particularly interested in these bridge lands? Why is the United States interested?
5. In what ways do nomads, farmers, and city people depend on one another?
6. On Figure 5, follow the courses of the Nile, Tigris, and Euphrates rivers. These rivers have few branches except near their sources. What may be one reason for this? Use the map on page 128 in answering this question.
7. Little by little the life of people in the bridge lands is being changed by modern civilization. In which group—nomads, farmers, or



Figure 244. A skilled worker in Amman

city people—are ways of living likely to change rapidly? In which group will changes probably come most slowly? Why?

8. Baghdad, capital of Iraq, is a much larger city than Riyadh, capital of Saudi Arabia. Use Figure 5 in showing why one should expect this.

Bridge-Land Countries

Turkey

Istanbul. In the picture on the next page, we are looking down on Istanbul (Fig. 5), one of the most famous cities in the world. For nearly 2000 years, it has been important in the affairs of Europe and southwestern Asia. It has been the capital of empires. In it have lived powerful emperors and sultans. Almost every important country in Europe has sought, in some way or other, at some time or other, to gain control of it. Time and again, armies have fought for the prize of Istanbul.

Istanbul is a new name for this famous old

city. During most of its history it was known as Constantinople. The city was founded on the shore of the little bay in the left of the picture, a bay called the Golden Horn. Today, as shown by the picture and the map (Fig. 246), Istanbul is a city of two parts, joined by bridges. The older part of the city is in the foreground. The modern business district is beyond the bridge in the picture.

Istanbul has many advantages in its location. The land on which the city stands is well drained, yet not too hilly for streets and buildings. The Golden Horn is a good harbor. Within a few miles of the city are many farms and farm villages. Along the near-by



Figure 245. A famous city at a world crossroads

Courtesy Pan American Airways

coasts are many towns and fishing villages.

These local advantages, great as they are, scarcely begin to explain the size and importance of Istanbul. Its location as a world crossroads counts for much more. Istanbul is in both Europe and Asia. In the picture we are looking from Europe to Asia, across a waterway of world importance. The hills and city on the right in the distance are in Asia. The water which separates Europe and Asia is the Bosphorus, part of the narrow waterway which connects the Mediterranean and the Black Sea (Fig. 5). A ship sailing directly from the Mediterranean to the Black Sea might pass along the far shore at the right of the picture, and then disappear between the hills in the distance.

The ships of all nations drop anchor in the harbor shown in the picture. From Istanbul,

a railroad leads to central Europe (Fig. 5). Another railroad begins just across the Bosphorus and runs all the way to the Persian Gulf (Fig. 5). Istanbul has grown in size largely because of the trade that moves along these routes, by sea and land. Since Istanbul controls such important routes, the city is of great importance.

Control of the Straits. The Bosphorus is only part of the 200 mile waterway which joins the Black Sea and the Mediterranean Sea. Ships passing from one of these seas to the other must pass through the Dardanelles and the Sea of Marmara, as well as the Bosphorus (Fig. 12). The entire waterway is often called the Straits.

It has long been difficult for various countries to agree on the control of the Straits in peace and in war. The land on both sides of

the Straits is Turkish (Fig. 5). However, the waterway itself is an international route, and to Russia particularly the free use of this waterway is of great importance (p. 109).

At the present time, an agreement among various countries gives Turkey alone the right to fortify the Straits. In time of war, Turkey may refuse to let warships pass. According to the agreement, merchant ships are always permitted to sail through the Straits.

From time to time, Russia has insisted on sharing with Turkey the patrol and defence of the Straits. Such an arrangement really would mean Russian control of the Straits, since Turkey is much weaker than Russia. Russian forts at the Straits also would mean strong Russian influence in the entire Mediterranean.

It is the fear of war which makes control of this great waterway seem so important to various nations. In times of peace, trade flows freely through the Straits, but in time of war one country might be able to close the Straits to enemy ships. Some people believe that the United Nations should control the Straits. With such control, and permanent peace, the old grounds for distrust and fear might disappear. Whatever happens, the Straits and Istanbul will remain centres of world interest because of the routes that cross there.

A new country and a new capital. For hundreds of years Istanbul, or Constantinople, was the capital of Turkey. Now Ankara (Fig. 5), in the interior of Asiatic Turkey, is the capital. The moving of the capital is part of a thrilling story—the story of the change from old Turkey to new Turkey.

Before World War I, Turkey was an empire which included all of Iraq, Syria, Lebanon, Israel, Jordan, and parts of Saudi Arabia and Egypt. In that war, Turkey fought on the side of Germany. When the war was lost, Turkey lost most of its empire. For a time it seemed that Turkey itself might

be divided up. However, a great Turkish leader arose, a man called Ataturk. He saved what was left of the Turkish Empire, and built the new Turkey.

Soon after coming to power, Ataturk moved the capital from Istanbul to Ankara. He also made many other changes. The new Turkey was organized as a republic. Ataturk changed the alphabet from Arabic letters to letters like ours, and encouraged people to learn to read and write. He ordered that no longer should any man wear the red cap called the Turkish fez. Women should no longer wear veils over their faces.

The old Turkey was, on the whole, a backward agricultural country. In the new Turkey there are modern machines on some of the farms. In Figure 247 men are harvesting rice with a combine. The crop was grown with the help of irrigation on the floor of a valley. Of course, only a few Turkish farmers have yet been able to afford such expensive machinery.

Figure 246. Where two continents meet



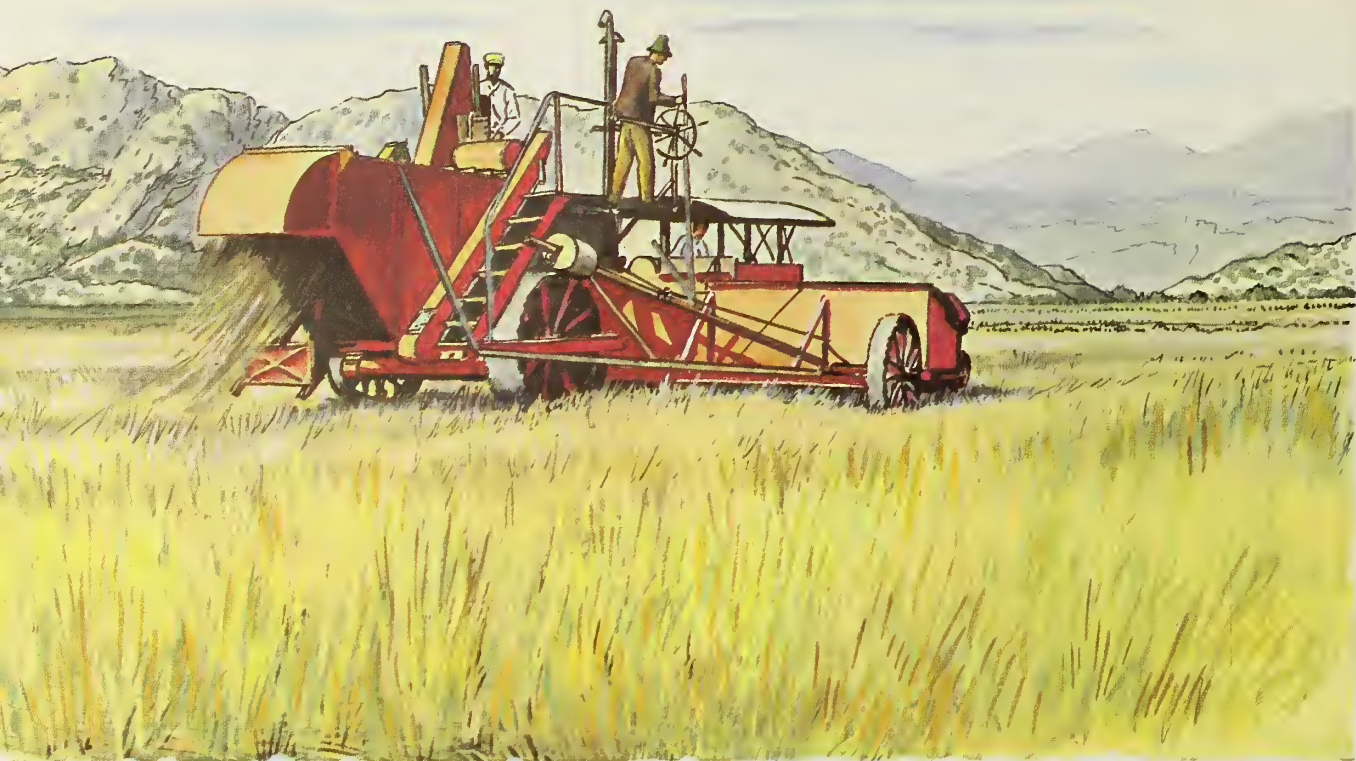


Figure 247. In the new Turkey

Turkey has many new factories. The country supplies part of its own needs in cloth, machinery, cement, and other things.

Ankara, the new capital, is much more modern than Istanbul. The streets in Ankara are wide and straight. It is said that Ankara stands for the new Turkey, while Istanbul is a reminder of the old.

Nomads, farmers, and miners. In spite of some recent growth of cities, about one-half of the Turkish people are either farmers or nomadic herders.

Most of the Turkish nomads live on the high, dry plateau of Turkey in Asia. From their herds come large amounts of wool and mohair, much of which is exported. Most of the farmers live near the coasts, where there is more rainfall than on the plateau (Fig. 107). Nearly half of the crop land is planted to wheat. There are also many fields of barley, corn, cotton, oats, rice, and tobacco. Fruits are important, too. Many villages, surrounded by vineyards and olive orchards, look much like villages in Greece or Italy.

Some Turks make a living from mining coal, chromium, silver, lead, or other minerals. Turkey is one of the world's leading producers of chromium. In the country as a whole, miners are few, and the known mineral resources are small. Turkey is still chiefly an agricultural country, but changes are coming to Turkey as they are to other lands.

Egypt

The Suez Canal. The famous Suez Canal in Egypt is the gateway of the southeastern Mediterranean (Fig. 5). It connects the Mediterranean Sea with an arm of the Red Sea. This canal, more than 100 miles long, is really a wide, deep ditch. It has no locks. Through the Suez Canal, as through the Turkish Straits, pass ships of all nations—passenger liners, oil tankers, and grimy freighters. The ships of all countries have equal rights in using the canal (p. 15).

The picture on the next page shows Port Said, at the northern entrance to the canal

(Fig. 7). This city makes a living from the people who care for the canal, and from the traffic which passes through it. Port Said has "filling stations for ships," that is, places where ships can get coal or fuel oil, as well as fresh water, food, and other needed supplies.

In Port Said, there is a statue of Ferdinand de Lesseps, the builder of the Suez Canal. On the statue are words which, translated into English, mean, "To open the earth to all peoples." This is a reminder that the Suez Canal opened the way for people in Europe and southern Asia to trade with each other much more easily than ever before. It is more than 5000 miles shorter from London to Bombay by way of the canal, than by way of South Africa (p. 15).

In the picture there are several signs in

English. The Suez Canal does not, however, belong to Britain. It was built and was maintained by the Suez Canal Company, which collected tolls from passing ships, and paid dividends to those who invested money in the company. For a long time Britain really controlled the canal because the British government invested much money in the canal company and because Britain had great influence in Egypt. The rights which Egypt gave to the Suez Canal Company were to have been returned in 1968 to the Egyptian government. The Suez crisis of 1956, however, changed all of this. As we saw (p. 15), Egypt seized the canal, but agreed in 1958 to pay the shareholders of the company for their losses. It is now quite clear that the canal is operating smoothly under its new management.

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Figure 248. At the northern entrance to the Suez Canal



In the Nile oasis. Most of the people in Egypt have nothing to do with the Suez Canal. They are farmers who live along another waterway, the Nile River (Fig. 7). Partly because of these millions of farmers, Cairo has become a city of more than a million, ten times as large as Port Said. Without the water from the Nile, Egypt would be a desert. There would be no city such as Cairo. Sometimes it is said that "Egypt is the gift of the Nile."

The farm land in the Nile delta is some of the most valuable farm land in the world. The land is nearly level. The soil is rich and deep. There is plenty of water for irrigation. With irrigation, crops may be grown both in summer and in winter.

The building of dams across the Nile has greatly increased the value of the farm land. Before these dams were built, there was too much water in the river during the flood

season, and too little during the rest of the year. Now the dams hold back part of the flood, saving the water for the time of year when the river normally would be low.

Most of Egypt's export trade depends on farm products, chiefly on cotton. Britain is one of the best customers, and Britain supplies some of the imports. So far, little mineral wealth has been discovered in Egypt.

Visitors. Each year thousands of American and European tourists visit Egypt. Many Egyptians make a living by caring for them. Some of the tourists are on their way to or from the Orient, and stop over in Egypt. A crossroads location helps the tourist business.

Egypt has two great attractions for tourists. One is the mild, sunny, winter weather. The other is the record of the past. In Egypt one may wander through palaces whose walls are covered with carvings made thousands of years ago. The pyramids, huge monuments of stone, are famous throughout the world.

United Arab Republic. An important event took place in 1958 when the people of Egypt and Syria (p. 312) agreed to unite their countries. The new republic is called the United Arab Republic, with supreme power being given to the president. In this way, Egypt's power in the bridge lands has grown.

Israel

A small, young nation. As the map on this page shows, Israel is very small. The distance from Jerusalem, on the eastern boundary, to the Mediterranean Sea on the west is less than 40 miles. Farther south, it is somewhat wider, but the full length of the country is only about 250 miles.

Israel is a young nation. Its independence was proclaimed in 1948. Before that, the area was part of Palestine, governed by Britain. The boundary between Palestine and Jordan followed the Jordan River (Fig. 249).

Figure 250 shows one of the new Jewish farm settlements in this old land. As the

Figure 249. A small bridge land

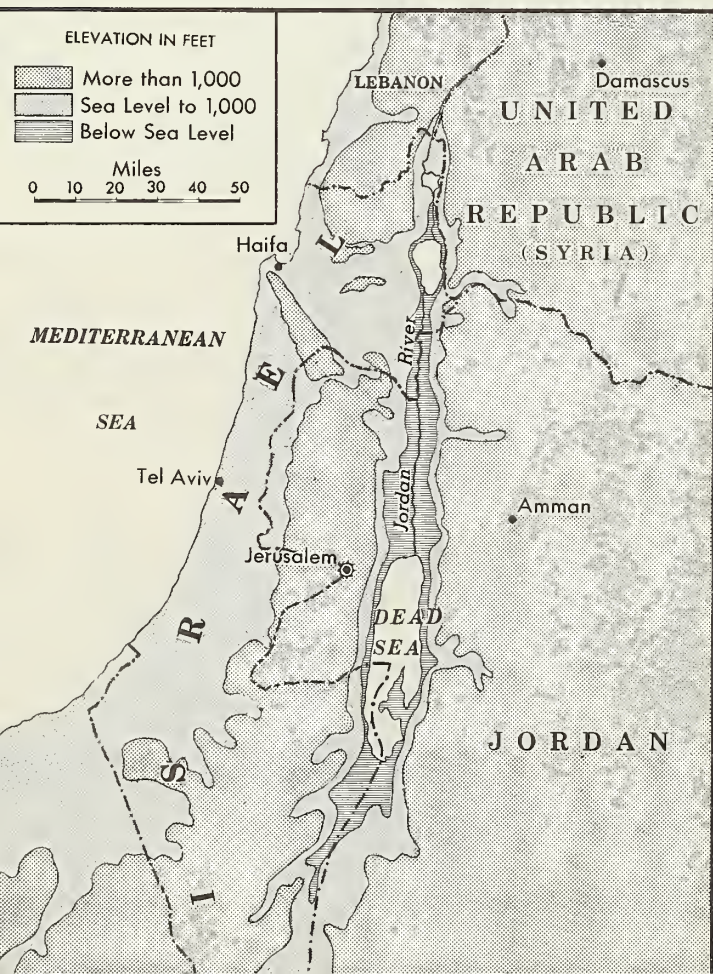




Figure 250. Two villages in an ancient land

© G. Eric Matson

picture suggests, the fields around this village produce fine crops. Water for irrigation is brought from the Jordan River (Fig. 249). The long rows of tall cypress trees keep the wind from damaging the young fruit trees planted between the rows.

In spite of its small size and its youth, Israel is a land of world importance. Many nations are interested in Israel because it is so close to the Suez Canal (p. 70). Oil adds to Israel's importance. As Figure 238 shows, two pipelines connect the oil fields of northern Iraq with the Mediterranean Sea. One of these pipelines reaches the sea at Haifa, in Israel.

Religion adds still more to interest in Israel. It is a Holy Land to Christians, Jews, and Mohammedans alike. Jerusalem is sacred to all three faiths. The boundary between Israel and Jordan runs through the city.

Settlements in Palestine. Both Arabs and Jews have lived in the land that now is called Israel for many hundreds of years. During most of this time, the Arabs outnumbered the Jews. Today, however, there are few Arabs in Israel. Before the new nation was organized, there was war between the people of Israel and neighboring Arab lands. Most of the Arabs in Israel fled to nearby Arab lands.

The Jewish population in this area has grown rapidly since World War I. In less than 30 years, hundreds of thousands of new settlers arrived. Most of them came from central and eastern Europe, especially from Germany and Poland. Some left their old homes willingly. Others were driven from their homes in Europe, and sought safety in this area.

As these thousands of people arrived, new cities were built. In 1917, Tel Aviv had about 1000 people. By 1951, its population ap-

proached 350,000. New industries have been started. Trade with other lands has increased.

Some of the newcomers became pioneer farmers. They built irrigation works, drained swamps, cleared away stones, and began to grow grain, vegetables, and fruits (Fig. 250). Israel now exports millions of oranges each year, most of them from these new farms.

Troubles. When Britain was in control of Palestine, there was much trouble about Jewish immigration. The Arabs and the Jews could not agree on how many settlers should be permitted to enter the country, or what kind of local government they should have. Finally, open war led to a division of the country, and to the recognition of the new nation of Israel. Some time later, Jordan took over part of eastern Palestine, where many Arabs lived.

Jordan

Beyond the Jordan River. Jordan is east of Israel, and most of it is across or beyond the Jordan River (Fig. 249). For a time the country was called Trans-Jordan. "Trans" means "across," or "beyond." The river is important to both Jordan and Israel.

As a whole, Jordan gets less rain than Israel. The rain-bearing winds come from the west—from the Mediterranean. As Figure 107 shows, there is less and less rain as one moves farther and farther east from the Mediterranean. East of Amman, most of the people are nomads. West of Amman, most of them are farmers. Some of the people shown in Figure 241 may be farmers. Others, like the two men walking in the middle of the street, may be nomads from the desert.

[310]

Figure 251. Looking across the Tigris at Baghdad



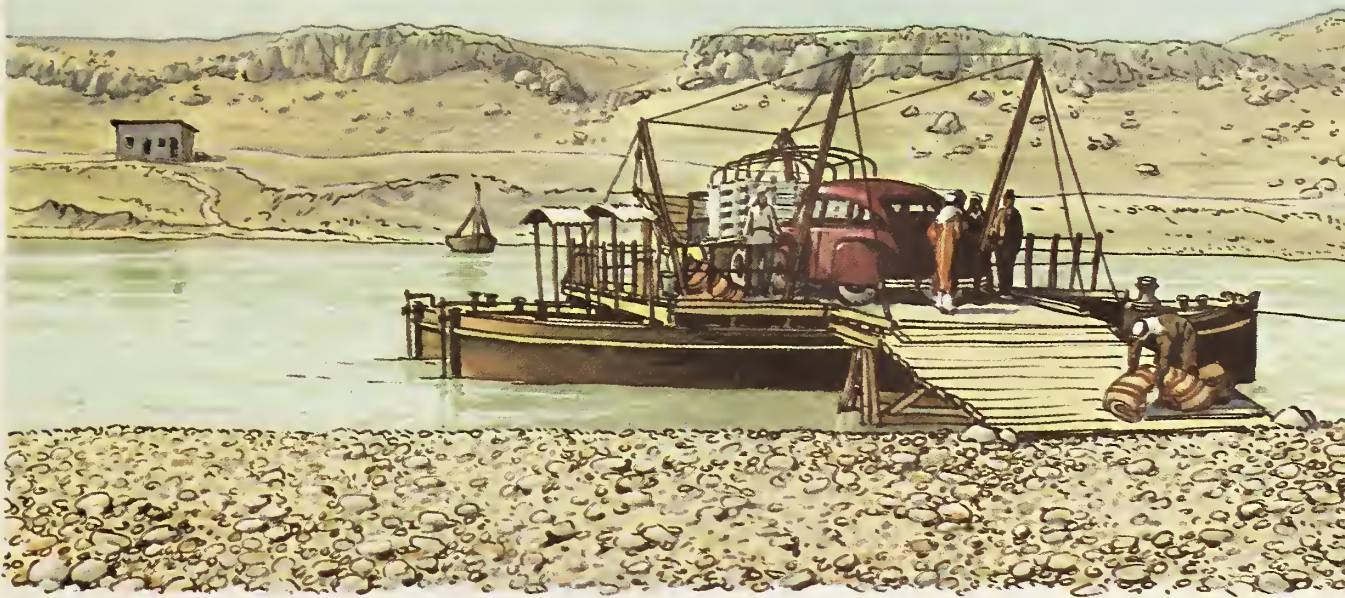


Figure 252. Crossing a river north of Baghdad

Oil makes Jordan important to the outer world, although the country is poor, and rather isolated. Two pipelines cross Jordan. One reaches the sea at Haifa, in Israel; the other at Sidon, in Lebanon (Fig. 238).

Britain was in control of Jordan from the end of World War I until 1946, when Jordan became independent.

Iraq

Along the rivers. The pictures on these two pages are river scenes in Iraq. There are similar scenes in many other places in the country, along either the Tigris or the Euphrates (Fig. 5). One picture suggests how a river may be important for irrigation and for transportation. The other picture suggests that a river may be a barrier to travel.

As we know, the Tigris and Euphrates oasis was the home of an ancient civilization (p. 3). Long ago, all the cities of Babylonia fell in ruins. Other cities have taken their places. Basra is a great port on the Persian

Gulf (Fig. 5). In northern Iraq is Kirkuk, (Fig. 238), an important centre of the oil industry. In middle Iraq is Baghdad, the capital and a crossroads city in a crossroads country.

Travel routes reach out in all directions from Baghdad. The only railroad connecting Europe and the Persian Gulf passes through the city (Fig. 5). A dozen caravan trails cross at Baghdad, one of them connecting the city with Damascus. Boats, large and small, sail up and down the Tigris, past the front door of Baghdad. Many rafts loaded with grain or wool float down river to the city. There both the cargoes and the rafts are sold. The owner may walk, or perhaps take a bus, back home.

In Figure 251 we are looking across the Tigris River to the flat-topped houses of Baghdad. The sun-dried bricks of the buildings are almost exactly the same as those made of sun-baked clay in ancient times. Melons such as those in the picture may be seen in almost every market in the country.

In Figure 252, an automobile is being ferried across one of the branches of the Tigris, north of Baghdad. Trucks and automobiles are not uncommon today even in the deserts of the Near East. Air-conditioned buses regularly carry passengers along the caravan route between Damascus and Baghdad.

New wealth in an ancient land. No one in ancient Babylonia dreamed that some day great quantities of valuable oil would come from deep in the earth. Today, oil is a source of great wealth in Iraq. Each year millions of barrels of it are pumped through two pipelines to the Mediterranean (Fig. 238). The oil companies pay some part of the value of this oil to the Iraq government. Companies in several countries have a part in developing the oil resources in Iraq.

Oil is the chief export of Iraq. Next in value are grains and dates. There are millions of date palms along the rivers near Basra.

Syria and Lebanon

Two new independent countries. Syria and Lebanon are two countries which, like Jordan, recently have become independent. Once they belonged to Turkey (p. 305). When the Turkish Empire broke up, after World War I, Syria and Lebanon were taken over by France. Finally, during World War II, they were given their independence. As we have seen (p. 308), Syria gave up her independence in 1958 to become, with Egypt, part of the United Arab Republic. Egypt is the more influential partner.

Mountain and desert. The mountains which border the eastern end of the Mediterranean extend north from Israel and Jordan, through Lebanon and Syria, to Turkey (Fig. 5). Little Lebanon is almost entirely in the mountains. Syria, much larger than Lebanon, extends far to the east into the desert (Fig. 107).

In many places in both Syria and Lebanon, the mountains come close to the sea. For

example, at Beirut, the capital of Lebanon, there is almost no coastal plain. From a boat in the harbor, one sees the white, flat-roofed houses of the city, behind them a line of pine-covered hills, and in the background the peaks of tall mountains.

Many farmers make their homes in these mountains. Their villages, crops, and ways of farming are much like those of the people shown in Figure 240. Eastern Syria, like eastern Jordan, is the home of nomads.

A place of crossing. As in years long past, important routes cross in Syria and Lebanon. Through these countries passes the only railroad which follows the eastern end of the Mediterranean (Fig. 5). Oil pipelines from Iraq and Saudi Arabia cross Syria and Lebanon to Mediterranean ports (Fig. 238). From Damascus, a caravan route reaches east to Baghdad (Fig. 5). For many centuries men have used the natural passageway along the Tigris and Euphrates rivers when travelling between Mediterranean lands and lands near the Persian Gulf (p. 6).

Damascus, capital of Syria, has been a centre of trade and travel ever since ancient times. Some say it is the oldest living city in the world. Men chose to live there long ago for the same reason men live there now. Damascus is an oasis city. Near it a stream flows from the near-by mountains, and loses itself in the desert. Its waters have made Damascus a garden city in a dry land.

Iran

Between Russia and the sea. Iran is another country highly prized because of its location at a world crossroads, and because of oil. Iran shuts Russia off from the Persian Gulf and the ocean routes along southern Asia.

The oil fields of Iran have produced even more oil than those in Iraq. Almost all of this production has been in southern Iran, where the British have concessions (Fig. 238).



Figure 253. Teheran, in a high mountain valley

© Ewing Galloway

In 1951 a dispute arose over the oil industry. Production was stopped. Iran lost its greatest income. No settlement was in sight early in 1954, although repeated attempts had been made to find some solution to a very difficult problem.

Figures 5 and 107 show that Iran is a desert land, with many high mountains. Until recent times, it was a barrier land. The only travel routes across it were caravan trails.

Now, this barrier land has become a bridge land. Men and goods move more easily from one side of the country to the other. Good truck routes cross deserts and climb mountains. A railroad reaches from the Persian Gulf to the Caspian Sea (Fig. 5). During World War II millions of tons of supplies

were shipped to Russia by way of this railroad—supplies which Russia badly needed in fighting Germany.

Unfortunately, rivalry in Iran increases somewhat as travel across it becomes easier. Some countries are afraid that Russia may try to move across Iran to the Persian Gulf and gain control of one of the routes to India.

Teheran. The railroad which crosses Iran passes through Teheran, the capital, shown in the picture above. The Parliament meets in the large building on the right. Other modern buildings may be seen elsewhere in Teheran. Most of them have been paid for, in one way or another, from payments made to the government by oil producers.



Figure 254. An oil camp in Arabia

Outside the cities. In Iran, as in other bridge-land countries, most of the people are farmers or nomadic herders. In the mountain valleys some farmers grow wheat, barley, and rye with the help of winter rains. In general, however, farming depends on irrigation. Many of the nomads move up and down the mountain slopes with their flocks, using first one pasture land and then another, as the seasons change.

In nearly every village or city there is some simple industry. One of these industries is the making of the world famous Persian rugs. They are called "Persian" because another name for Iran is Persia. Women and children make most of the rugs. Many of these people work in their own homes, for very low wages. Except for oil, Persian rugs are the chief export of Iran.

Afghanistan

Between Russia and India. Afghanistan is said to look two ways, toward India and toward Russia. As Figure 5 shows, it is a land of high plateaus and mountains separating India-Pakistan and Russia. Afghanistan controls the northern approaches to Khyber Pass, an ancient gateway to India (Fig. 5). These are good reasons for thinking of Afghanistan as a bridge land.

Most of the people in Afghanistan are farmers or herdsman. Small amounts of oil are produced near the northern and western borders.

Saudi Arabia

Desert kingdom. The country called Saudi Arabia gets the first part of its name from

an Arab king called Ibn Saud. It was he who built this one big country. He united various tribes, and conquered a small Arab land once called the Hejaz, near the Red Sea. As Figure 5 shows, Saudi Arabia now fills almost all of the Arabian peninsula.

Saudi Arabia has two capitals, Riyadh and Mecca (Fig. 5). The king lives at Riyadh, a rich oasis in the Arabian desert. Mecca was the capital of the Hejaz before that area became part of Saudi Arabia. Mecca has remained as a capital in the larger country partly because it is the religious capital of Mohammedans everywhere. Each year tens of thousands of Mohammedans come to worship in Mecca. They come from lands as far apart as French West Africa and Java. Caring for these visitors is the chief business in Mecca and in regions near-by.

Oil in the desert. Figure 254 shows an oil camp in Saudi Arabia. The men who live in this "drilling camp" hope to find oil. Already, oil wells in Saudi Arabia produce millions of barrels of oil each year. Most of the production is in the area where Americans have oil concessions. Oil is carried through an immense pipeline from this area to the Mediterranean coast (Fig. 238).

Oil and irrigation. The government of Saudi Arabia gets much of its income from the oil concessions. Part of this income is spent in developing new irrigation projects. Frequently the oil companies have used their machinery to drill irrigation wells. To many people in dry Arabia, a well of water may seem as valuable as a well which produces oil. Wells of water may change a desert like that in the picture into a beautiful oasis.

Because of irrigation projects, some of the nomads of Saudi Arabia are settling down to farming. Many are combining herding with farming. The men may travel about with their flocks for a few weeks or months when there is good pasture in the desert. When the pasture is poor, they can return to their homes in the oases.

Helps in Learning

1. Do you think that Ankara, the new capital of Turkey, will grow to be as large as Istanbul? Why, or why not?

2. If you could visit only one city in these bridge lands, which one would you choose? Why? What would you expect to see there?

3. What difference would it make to Russia if the Turkish Straits were closed to all shipping? What difference would it make to the people of Istanbul?

4. Most Turkish farmers live in one part of the country. Most of the nomads live in another part. Tell where each group lives, and why.

5. Why is the Suez Canal important to the people of India and Pakistan? Is it important to the people of South Africa for the same reasons? Explain.

6. What is meant by the saying that "Egypt is the gift of the Nile"?

7. Suppose a traveller had been in Palestine in 1910, and that he returned to that region in 1946. What changes would he notice?

8. Very little oil is produced in Israel. How can it be, then, that oil is a reason for the country's importance?

9. In what way is Jordan important to Britain?

10. In which city would you expect to find the more pleasant climate, Baghdad or Teheran? Tell why.

11. Baghdad is "a crossroads city in a crossroads country." Use Figure 5 to explain this.

12. At what season do you think the shepherds of Iran herd their animals in the high mountains? At what season in the low plains?

13. Use Figure 5 to make clear why Afghanistan is said to look down into the plains of Pakistan and India and into the plains of Russia. Why is this truer of Afghanistan than of Iran?

14. What were some of the difficulties faced by the people who built the pipeline across Arabia, from oil wells near the Persian Gulf to Sidon on the Mediterranean? How is this pipeline helpful?

15. Choose two pictures in this chapter which show people at work. Tell in what way or ways the people in one picture might depend on those shown in the other picture.

A CHANGING WORLD

In thinking about the world as the home of man, we should remember that it is a constantly changing world. It always has been so. It always will be so. Changes are ceaseless. Many changes affecting human life are brought about by natural processes—by Nature herself. Many others are brought about by human action.

Changes brought about by Nature. We have read on earlier pages of many changes that were caused by natural processes. For example, climates have changed. When some of the earliest uncivilized men lived near the Mediterranean, it got so cold in northern Europe that thick ice sheets covered great areas there. The ice changed the land, as we know (pp. 239, 263). Some areas were left with poor soil or bare rock. Other areas received deposits of fertile soil. The courses of many rivers were changed. There are falls and rapids at steep places in the new river channels. There are lakes in basins made by the ice. In many, many ways life today in glaciated areas in all the northern continents is affected by these changes made so long ago. Scientists think that sometime, in the very distant future, there will be another Ice Age. Great changes in climate take place slowly, over long periods.

Changes in weather are frequent in most places, at all seasons. They affect everyone. Everybody talks about them. Rainy years and dry years come and go over vast areas in which farming is the chief kind of work. The rains may mean success for the people. The droughts may mean failure. Winds influence temperature and moisture conditions, and much else. In many places, they seem always to be changing.

The work of rivers gives us other examples

of changes caused by natural processes. Every year, rivers carry enormous quantities of earth from the continents to the oceans. They are wearing down the land and building up the bottom of the sea offshore. Many rivers are making big deltas. From time to time, some of them leave old channels and open new channels. Many of the rivers cause damaging floods.

The oceans themselves are never at rest. Some ocean currents carry warm waters from low latitudes to high latitudes. Other currents carry cold waters from high latitudes to lower ones. Tides rise and fall, changing the depth of water in harbors and river mouths on every ocean coast. Ocean waves cut into the edge of the land in many places, forming cliffs.

In these ways, and *many* more, Nature changes the conditions under which men live. Everywhere and always, change of some kind is under way.

Changes caused by human action. Man, as well as Nature, has made changes in the world. He has cut down forests. He has plowed up grasslands. He has turned desert land into farm land by irrigation. He has drained wet land, turning swamps and marshes into farms. He has drained lakes, and made land from the sea itself by building dikes. He has harnessed rivers to do his work. He has made farms and factories, highways and railroads, towns and cities. His landscapes vary almost as much as those of Nature.

All these works of man do not mean that he can shape Nature at will and without limit to suit his convenience. He may be able, for example, to irrigate land where the rainfall is low, but he cannot increase the

rainfall. He may build a big dam for flood control, but he cannot prevent silt from collecting in the reservoir.

If there are forests on the slopes leading to such a reservoir, perhaps the forests can be protected. In this way, or in other ways, man can reduce the *rate* at which silt is deposited in the reservoir. Perhaps he can build the dam higher than otherwise would be needed, in order to use some of the storage space for silt. Perhaps he can build the dam higher at a later time, and so restore part or all of the original capacity. Perhaps it will pay to dredge silt out of the reservoir from time to time. Several things in combination may be best.

Careful study may be needed to find out, before the dam is built, *what* can be done, and what can *best* be done, about the twin problems of erosion and silting. They are far more serious, of course, on some rivers than on others.

The builders of a dam are powerless, then, to do away with erosion and silting. They cannot set aside the laws of Nature. Nor can other men, in other ways. So the idea that modern man *conquers* Nature is misleading. This idea is more common today than ever before. It has been strengthened by great inventions and discoveries made in recent years.

In a shrinking world. One of the ways in which the world has been changed as the home of man was the invention of the airplane. On December 17, 1903, two Americans, Orville Wright and Wilbur Wright, made the first flights ever made with a heavier-than-air machine. The longest flight measured 852 feet and lasted just 59 seconds.

The rate of progress in travel by plane since these men first took to the air is breathtaking. Distance, once so important in the affairs of men and nations, has been conquered. For many purposes it is now measured in hours and minutes, not in miles. Men have flown across the North Atlantic in little

more than five hours. They have flown around the world in 94 hours, without stopping. In November, 1953, a rocket plane was flown at a speed of 1327 miles an hour. This was twice the speed of sound. In 1952 air lines operating regular schedules here and abroad flew 963 million miles and carried 39 million passengers. Year by year such figures grow. The airplane seems to be changing the life of everyone in some way. It is everywhere drawing people closer together. The world has shrunk.

High mountains are still more or less serious barriers to travel by land. In early days, even the crossing of broad rivers was difficult. There have always been various obstacles to travel on the surface of the earth. Today, airplanes fly over high mountains (Fig. 255) about as easily as over rivers (Fig. 256). The skyways reach everywhere, over everything.

This does not mean that airplanes can be flown everywhere at all times. For example, airmen may be kept on the ground by bad weather. They may be unable to land where and when they wish to land. However, the weather hazards and other hazards of flying become less as weather forecasting becomes more accurate and as improvements are made in airplanes, instruments, and methods of flying.

The very ends of the earth already have been drawn by airplanes into the course of events. They have made the Arctic Ocean a region of vital interest and importance (Fig. 84).

Dawn of the Atomic Age. In another startling way we live in a new world. The Atomic Age is here. By finding how to release atomic energy, science has unlocked the basic power of the universe. As a result, the world has again been changed forever. The clock cannot be turned back. Man cannot live in the past. He must adjust himself to a new kind of world.

Even the scientists who work in our com-



Figure 255. In the high Andes

try on the problem of using atomic energy and making atomic bombs do not claim to understand atomic energy fully. The knowledge of each of them is incomplete. Few men have ever seen an atomic bomb. But everyone knows the fate of Hiroshima and Nagasaki, two Japanese cities, when Allied fliers dropped atomic bombs on them. One bomb destroyed each city.

In a future war, no one would need to send out planes to drop atomic bombs. Rockets provided with "atomic warheads" could be aimed accurately against targets anywhere.

If atomic energy is controlled and used only for the good of mankind, the world can

become a far better place than ever before in which to live (p. 19). Scientists tell us that atomic energy probably can be used in many different helpful ways within a few years.

Helps in Learning

1. Give examples of countries in the Old World that differ greatly in respect to each of the items listed at the top of the following page.

In each case, tell what the differences are.

What reasons can you give for each of the differences?



Figure 256. Over the lower Mississippi

- (a) Density of population
- (b) Related lands
- (c) Use of forest resources
- (d) Use of mineral wealth
- (e) Stage of advancement
- (f) Outstanding kinds of work
- (g) Individual freedom

How many additional kinds of differences can you name? What examples can you give?

How many examples of similar differences in the New World can you give?

2. Different nations have interests that affect progress in each of the countries listed below. What are the nations that have interests in each case? What are some of the problems growing out of the interests of these countries?

- | | |
|--------------------|-------------|
| (a) China | (d) Germany |
| (b) Outer Mongolia | (e) Turkey |
| (c) Korea | (f) Iraq |

3. Make a list of the changes brought about by Nature that are mentioned on page 316. How many items can you add to the list? Name one

or more places, if you can, where each kind of change has come about.

4. Plan a geography "spell down" by first making as long a list as you can of landscape changes caused by human action. Start your list with the man-made changes named on pages 316-317. After you have listed as many such changes as you can think of, give the list to your teacher to use in carrying on the spell down.

The members of the class stand in two facing rows while "spelling down." A good way to divide the class is to ask two leaders, or captains, to choose sides by alternately selecting a classmate until all members of the class have been chosen.

The spell down begins by the teacher reading the first item from the list of man-made changes. If the captain to whom the teacher assigns this item can name a country in which a large area of the landscape has been so changed, the leader keeps his place on the team.

The next item on the list is then assigned to the captain on the opposite side. And so on.

Anyone failing to give a correct answer has to take his seat.

When all the items on the list have been used once, the list may be used again, but different examples should then be given for each change.

The game continues until all persons on one side have been "downed."

5. What is referred to by each of the following statements? (If in any case you cannot tell, or if you are not sure that your answer is correct, look the item up in an earlier chapter.)

(a) It was a "free territory," small but important, at the head of the Adriatic Sea.

(b) It is a British island, south of Sicily. It is one of the "great little places of the world."

(c) It is the gateway to northwestern India.

(d) It is an island that China would like to get back from Britain.

6. See how many other important places or things you can describe with puzzles similar to those in Question 5. Perhaps you can make a list long enough to use in another "spell down."

7. What arguments for permanent world peace are suggested by the fact that *atomic bombs can be made cheaply*?

8. What arguments for permanent world peace are suggested by the fact that *there is no military defence against atomic bombs*?

9. What arguments for permanent world peace are suggested by the fact that *other nations have discovered the secret processes of making atomic energy*?

10. What arguments for permanent world peace are suggested by the fact that *any attempted defence against atomic war would be useless*?

11. What arguments for permanent world peace are suggested by the fact that, *if another war comes, atomic bombs will be used*?

12. What is the only solution, if we are to avoid the destruction of our civilization?

A Troubled World

War does not pay. The world will feel the effects of World War II for a very long time. Almost every country described in this book carries ugly scars from the tragic struggle. Undamaged farming areas, such as that in Figure 257, are uncommon over wide

regions. Countless manufacturing plants that were beehives of industry before the war, like the plant in Figure 258, are in ruins. The signs of war are everywhere.

The war created many problems besides those of restoring farms and factories, towns and cities. Some of these problems have been mentioned earlier. There are the problems, for example, of shaping the future of Germany and Japan. There are new disputes, growing out of the war, to be settled. There are crushing war debts to be paid. Canada's national debt is so big that it will take many years to repay it. Future generations, no one knows how many, must be taxed to help pay for the war.

The effects of the war are so numerous, so widespread, and so complex that they cannot be measured, even roughly. The war has made progress toward a better world more difficult, but also more urgent.

Stress and strain. The most serious and widespread dispute today is the one between what are commonly called the Communist World and the Free World (p. 136). The population of the Communist World increased from 147 million in 1924 to almost one billion in 1960. In the same time it grew in size from about eight million square miles to more than 14 million. Nearly all of the growth in both ways has taken place since the close of World War II. The people of the Free World are determined to resist further Communist expansion, by peaceful means if possible.

In Africa misunderstanding and suffering are resulting from the clash of interests between white settlers and black natives. Some four million white people fear that they may be sunk in a tide of 200 million Negroes who are alive to their lower condition and determined to improve it.

The dispute over the Saar between West Germany and France (p. 254), the trouble over Trieste between Italy and Yugoslavia (p. 291), the friction between Israel and its Arab

neighbors (p. 309), and the dispute between Pakistan and India over Kashmir (p. 52) are a few of the questions that have threatened friendly relations between neighboring free nations. And the last two problems like many others, have dragged along for years, with the possibility that they might explode into open war.

Mounting unrest. There is mounting unrest today in much of the world. Many people in the poorer countries look with longing eyes toward more fortunate countries. This is not strange, for the natural riches of the world are distributed very unevenly. The "have-not nations," as they are called, seek more land, new resources, better opportunities. Japan and Italy, for example, have been counted among the have-not nations. When Japan invaded Manchuria in 1931 (p. 160) and Italy invaded Ethiopia in 1935 (p. 234), these nations were seizing by force natural riches which they lacked and wanted.

When backward peoples see automobiles and other modern conveniences used in their midst by people from the outer world, perhaps people that rule them, they may easily be envious. They may even want things which they could not use if they had them. Seeing what others have, they at least want more for themselves. Millions of them seldom have enough to eat.

Many European colonies have become more and more restless. They want to be set free (p. 19). They have seen Britain give independence to India, Pakistan, Burma, and Ceylon, and they want the same treatment. They think that freedom from outside control would solve many of their problems.

Moves toward independence. Some European colonies, able to manage their own affairs, have been getting their independence. Many other colonies recently have been granted more self-government.

Britain has done most along these lines. It has granted independence to India (pp. 19, 59). But the Indian people were not them-

selves united. There was trouble between the two great religious groups of the country—Hindus and Moslems. Many people had been killed in riots. Finally, two countries were established. The Hindus formed the Republic of India, while the Moslems formed the Republic of Pakistan. However, both nations are members of the British Commonwealth. In working without cooperation for *independence*, the people of the peninsula of India seemed, for a time, to have lost sight of their *interdependence*. What they do concerns the entire world. More than 400 million people live in the peninsula of India.

Burma, like India, is now independent (p. 66). Unlike India, it cut all ties with Britain. Ceylon, on the other hand, decided to become a Republic in the Commonwealth (p. 70). The British have given independence to the people of Ghana and Malaya, and are getting ready to grant freedom to the people of Nigeria in 1960. They are also giving greater control over local affairs to other colonies, big and small. Britain seems to be depending more and more on ties of friendship and common interest to hold the British Commonwealth and Empire together. In time, the Commonwealth will likely consist of free peoples.

Changes in the French empire have also been far-reaching. Morocco, Tunisia, and Indo-China have cut all political ties with France. The Fifth Republic changed the structure of the empire. Each colony was to choose between keeping its original status, becoming an independent republic in the French Community, and becoming another *département* (subdivision) of France itself. It could also choose complete independence, as Guinea has done. Algeria's struggle for complete freedom is testing the strength of the new French Community.

After a period of disorder following World War II, the Dutch government agreed to give independence to all its island possessions in the East Indies, except western New Guinea.



Figure 257. In Denmark

The new nation so formed took the name Indonesia (p. 201).

It probably will turn out that some people are getting their independence who will be unable to run their own affairs successfully. It is one thing to *want* freedom, and the rights that go with it. But it is quite another thing to be able to shoulder the responsibilities that must be met by a free people. Lack of experience and intelligence and lack of resources may stand in the way of success.

A helping hand. The people of most backward countries need help. They need it in their fight against hunger, in improving public health, in starting industries, and in many other ways. Canada has had a share in helping such people. Many people from underprivileged countries are studying at our universities, so that they may go back and teach their countrymen better methods of farming and industry. Canada also contributes its share of money to the various United Nations

organizations that seek to improve conditions of living in many countries throughout the world. Also, Canada has contributed 25 million dollars yearly to a big, adventurous plan to improve conditions in eastern Asia. This plan is known as the Colombo Plan.

More and more the people of these needy lands must help themselves. It will be a big task. In Iran, for example, about four out of five of the total population of 17 million are farmers. The average farmer has less than three acres, and few tools beyond a wooden plow and a spade. He does not use fertilizers or modern methods for controlling insect pests. It will take many years to raise very much the standards of rural life in Iran and other countries in which conditions are similar.

World Resources and Trade

Importance of natural resources. In considering how the welfare of people everywhere can be increased, thought must always



Figure 258. In a city of southwestern Russia

be given to the natural resources of the world. They are the foundation of human life, the basis of human progress. Without soil, and moisture in the soil, crops could not be grown for man or beast. Without iron ore, steel could not be made. Without coal and oil, modern transportation would be impossible. In such a country as Canada, it would be difficult or impossible for anyone to go through a single day without wearing, using, or touching something made entirely or partly from petroleum. More examples of man's dependence on natural resources need not be given here. We have seen many illustrations of it on earlier pages.

Since natural resources have such vital importance, it is surprising that the nations of the world do not know more about their resources. It is surprising that they have not done more to use their resources wisely. Many nations still know almost nothing about their mineral resources. Many nations do not use most of their water resources, or do not

use them to good advantage. Many nations are wasting precious soil resources. Some nations are not at all interested, as yet, in bringing about the better care and use of their resources.

The situation in some countries is explained, of course, by the backwardness of the people. They may not yet need to use some kinds of resources in their possession. They may not know how to use some of them. They may have neither the capital nor the equipment with which to use them. They may not see the danger, for example, in cutting down the forests on their mountain slopes and then trying to live there with the soil steadily washing away. They may have badly damaged their forest lands and grazing lands in gathering material for fuel and charcoal and by overgrazing. Such countries need help, so that they may help themselves.

Of course, some countries are deeply interested in the conservation and efficient use of their natural resources. Canada, the United

States, and the countries of western and north-western Europe, including Britain, are the best examples. Unfortunately, most or all of these countries, including our own, became interested in such matters only after many years of carelessness and waste.

The United Nations has begun to make an inventory of the natural resources of the world, and will take steps to promote the conservation and better use of them. This will help many backward peoples to help themselves. It will be another basis for lasting peace.

The use of rivers. Ever since the dawn of civilization (p. 2), man has made much use of rivers. They have been natural highways, leading in many cases to the sea. Many of them have provided harbors for ocean shipping at or near their mouths. Water has been taken from them for irrigation, and for use in factories, towns, and cities. They have served as outlets for waste matter. Power has been developed at their falls and rapids. They have been used as lines of defence and as boundaries.

Rivers have been of such importance in so many ways that one might expect to find the river systems of the leading countries fully controlled and developed. One might expect that most other countries would have plans for developing their rivers fully as soon as possible. Neither thing is true. Canada itself still has very much work to do in developing its rivers. That is the case with the St. Lawrence, and the Red River, which flows into Lake Winnipeg.

In the future, to have enough power for all our people, we must construct many new dams to generate electricity. For example, at Grand Falls, on the Hamilton River in Labrador, there is over a million horsepower available when it is needed. There are many places in Canada and in other countries where rivers can be harnessed to provide power.

Oil for the future. "Rivers of oil" are taken from the earth each year. Most of it is pro-

duced in the Americas. The output has increased tremendously in recent years. Much of the oil moving in Canada and the United States flows underground through oil pipelines. The interprovincial pipeline from the Alberta oilfields to the Great Lakes is the longest crude oil pipeline in the world.

It is estimated that the remaining *known deposits* of oil in the world total some 60 billion barrels. This amount of oil is only enough to keep the world going for twenty or thirty years. We must remember, also, that the consumption of oil increases each year as more and more oil is used for heating and for operating automobiles and tractors. More and more we are relying on oil to get things done.

Do these facts mean that presently the world must get along without natural petroleum, and so without the products of great oil refineries like the one in Figure 259? The answer is no. Undoubtedly, the *known deposits* of oil do not contain all, or *nearly* all, of the oil remaining underground.

Judging by the past experience of the oil industry, we may confidently expect to find many new deposits, containing great supplies. It is possible, however, only to guess at the location and the size of the deposits awaiting discovery. Of course, the oil companies do not guess blindly. Their geologists and other experts know the kinds of places in which oil is likely to be found, because they know the kinds of places in which it *has* been found. Careful field studies and surveys are made. If the results are favorable, test wells are drilled.

There are three great oil regions. They are the regions in which new discoveries are most probable. The first in importance is the Eastern Mediterranean Region. It includes the lands around the Caspian Sea, the Black Sea, the Persian Gulf, and the Red Sea. The second most important region is the Caribbean Region. It includes the lands that border the Caribbean Sea and the Gulf of Mexico. This is now the chief *producing*

region. The third region is the Far East Region. It covers the East Indies. The present industry in the two oil regions in the Old World was described briefly on earlier pages, in connection with the countries involved.

Exploration for oil is far from complete in any of these three oil regions. It is being carried on actively, partly by American companies working under "concessions." It is being done under a wide range of conditions, as two stories will show. A few years ago, a test well was drilled by an oil-prospecting company in the Egyptian desert, near one of the famous pyramids. Try to imagine the differences between the two worlds, ancient and modern, represented by the pyramid and the oil derrick.

That same year the same company announced that some of its scientists would make a search for oil in the rock and sand beneath the waters of the Atlantic Ocean, near the Bahama Islands. These explorers were to examine more than a million acres of the ocean bottom. They were to have diving chambers, and were to use radar to locate their positions.

Oil was found long ago in various places outside the three regions just mentioned. Doubtless that will happen again many times. Discoveries of large deposits have been made in western Canada, near Edmonton, and there are deposits in the Northwest Territories, near the Arctic Circle. They were worked during World War II. Russian scientists have found signs of oil on the northern coast of Siberia. It will be hard to develop an oil industry in the Arctic Region. But when oil runs short elsewhere, it will be produced in the Arctic in spite of snow and ice and cold. Recently important deposits have been found in Australia.

It will be a long time, then, before the world will have to use synthetic products in place of oil products. When it becomes necessary or desirable, substitutes are at hand. Sometime, atomic energy may remove the

need for using fuel oil for power (p. 19). At present, about three-fourths of the oil produced is used in some form to drive airplanes, ships, trains, automobiles, trucks, motorcycles, and tractors. The remaining fourth is used in thousands of other ways.

The increasing use of petroleum for helpful purposes should not be regretted. Petroleum is making great contributions to everyday life, and can make even greater.

Oil in world politics. As we have seen, for example on page 297, there has been keen rivalry between countries over oil deposits. Such rivalry was natural. All leading countries have wanted much oil—for use in the event of war and for peace time purposes. The total world supply, however great, is limited. It cannot last forever.

Oil is one natural resource about which there is general concern. Some countries have no deposits of oil. Others have not enough to meet their normal needs. Still others, for example the United States, want to ease the drain on their own supplies by drawing on new oil fields in our own and other countries.

Some of the greatest deposits of oil found in recent years are in backward countries that could not possibly develop them alone. Those countries are helped if they receive fair pay for the oil they let foreigners produce and remove. Other countries are helped if they can buy the oil they need. On the other hand, if a strong country forces a weak country to grant concessions against its will or to accept unfair terms, a grave injustice is done. Such cases have happened.

It is to be hoped that in the future any dispute that may arise over oil deposits may be settled peaceably.

World trade. The chief kinds of things usually exported and imported by the countries of the Old World were considered in earlier chapters of this book. Little was said about the amount and value of the trade, because international trade was completely up-

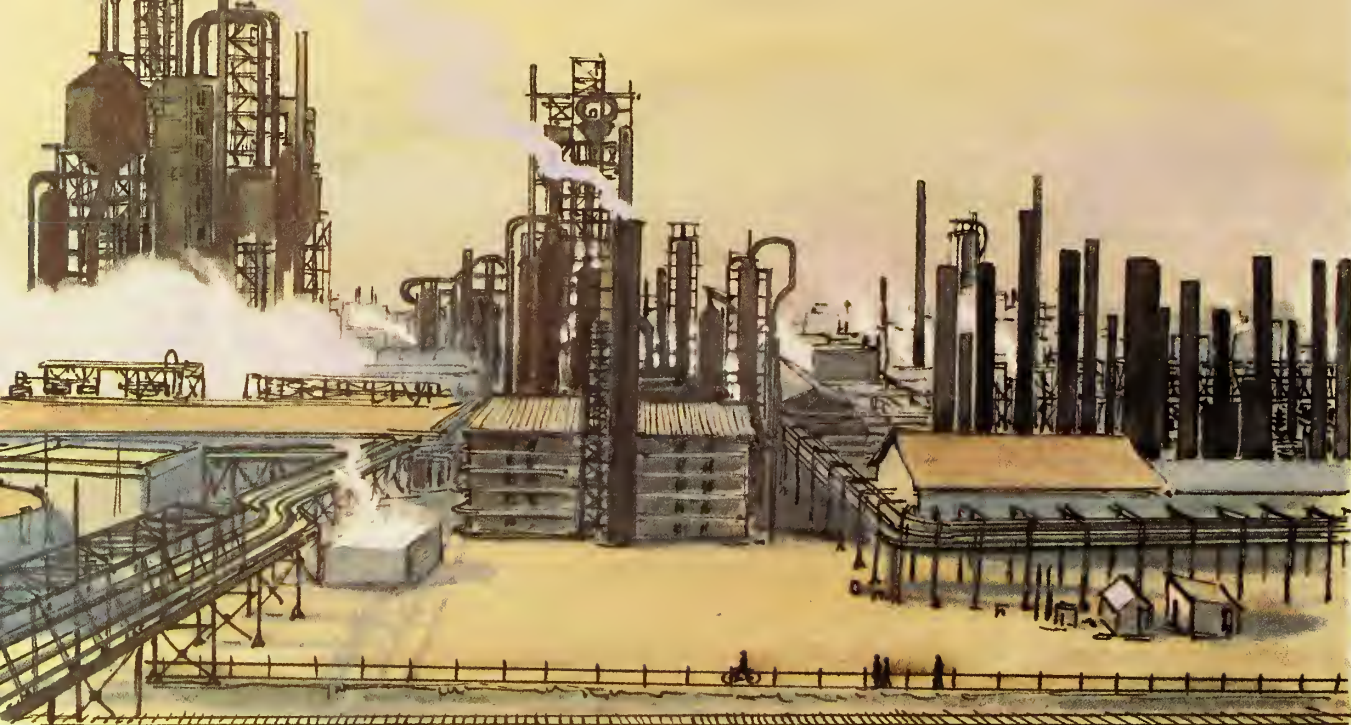


Figure 259. A modern oil refinery

set, of course, by World War II, and has not been normal since.

We have seen that the foreign trade of a country must flow both ways, outward and inward. A country cannot sell, for any length of time, and not buy. It cannot buy, and not sell. Its sales and its purchases must be balanced in some way.

All this can be illustrated further by the foreign trade of Canada. After the end of World War II, Canada sold abroad much more than it imported from other countries. Much of our trade was with countries that fared badly during the war. It took some time before these countries could build up their industries so that they could export goods to us in return for all the food and raw materials we were sending them. In the case of Britain, Canada made it a loan to help it buy more food here.

Though trade conditions between countries have improved, there are still problems ahead. For instance, although Britain wants grain, meat, and woodpulp from Canada, it cannot afford to buy as much as it requires. Britain still is unable to sell enough of its

products in Canada to balance all the things it would like to buy from us. The only solution to the problem is for Britain to sell more of its manufactured goods here, or for our own country to sell less food in Britain.

Most countries are in the same position as Canada just now. They have either too much or too little to sell. Balanced trade among the nations of the free world can do much toward making them stronger and bringing them lasting peace and prosperity. And so they should join whenever possible in removing unnecessary trade barriers, in expanding trade, and in preventing sharp ups and downs in the flow of trade.

An example of competition. A striking example of competition in trade and industry is furnished by rubber. It would be hard for anyone to list all the ways in which rubber is used. There are many thousands of uses. The demand for rubber has increased tremendously in recent years. More and more people are buying automobiles, and more tires are required. More people travel by air nowadays, and a great deal of rubber is used in the construction of airplanes.

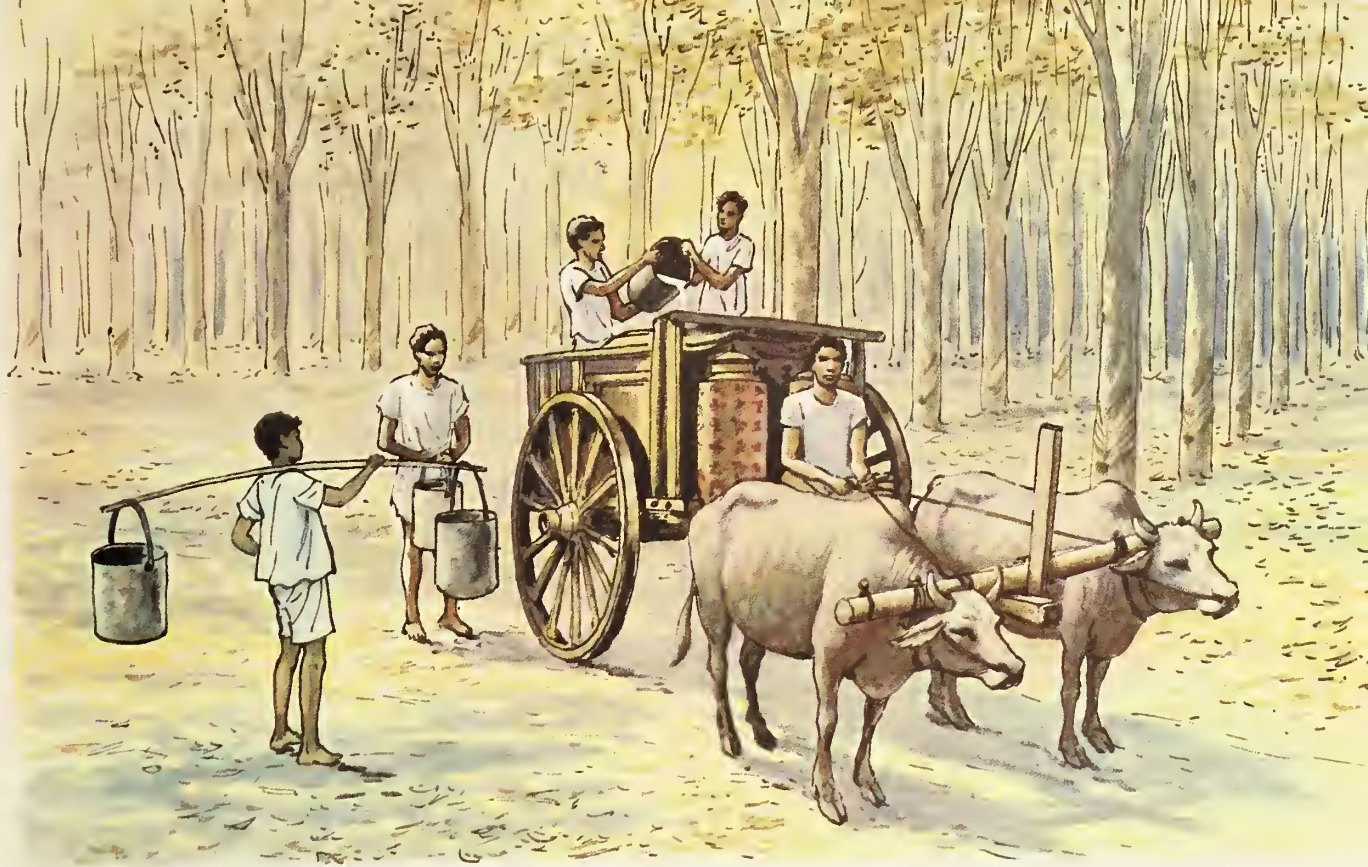


Figure 260. Source of natural rubber—a plantation in Malaya

Figure 261. One source of synthetic rubber—a factory in California



Before the war, the rubber industry of the world depended on *natural rubber*. The main supplies of latex and crude rubber came from Malaya, Sumatra, and Java, through Singapore. After war broke out between Britain and Japan, these sources of supply were shut off. Japanese forces overran the rubber-producing areas. Enormous quantities of rubber were needed by the Allies for the war effort. To meet the urgent demand, a *synthetic-rubber* industry was started. It grew rapidly.

The war over, the owners of rubber plantations in the Far East began to get them back into production. A battle loomed between natural rubber (Fig. 260) and synthetic rubber (Fig. 261) for the North American market. Which would win? Could the other keep going? If synthetic rubber were to win, investments in the rubber plantations, many of which are British would suffer. Many natives would be thrown out of work. These people would be able to buy fewer goods from other countries. If natural rubber were to win, heavy factory investments in synthetic rubber would be lost, and many workmen would be displaced.

Synthetic rubber is cheaper than natural rubber, and for that reason it doubtless will keep the lion's share of important markets. That will be in the interest of the consumer—the public. But the demands for rubber have become so great and they are of such varied sorts that it now is clear that synthetic rubber will not drive natural rubber from the market. The two kinds will share the market. That will be a good outcome. One may hope it will be matched in many other fields.

Helps in Learning

1. Make a list of the countries in the Old World that you think may correctly be called "backward." Tell why, in your opinion, each

country that you listed may be so classed. Then answer these questions about each country:

- (a) Are mineral resources lacking in this country?
- (b) Is it without forest resources?
- (c) Are there no large areas of fertile soil?
- (d) Has it a poor road system, and few railroads?
- (e) Is it without important industries?
- (f) Is it densely, or sparsely, settled?

From answering the six questions about the countries you listed, does it seem to you that there are striking likenesses, or striking differences, between backward countries?

2. Make a list of countries in the Old World that you think may correctly be called "progressive." Be ready to give reasons for including each country in your list. Then answer for yourself these questions about each country:

- (a) Is it a large country, or a small country?
- (b) Is it rich in mineral resources, or not?
- (c) Is it rich in forest resources, or not?
- (d) Has it rich resources in fertile farm lands, or not?
- (e) Has it great resources in power for manufacturing, either coal resources or water power resources, or both?
- (f) Has it a strong government?
- (g) Is it densely peopled, on the whole, or sparsely peopled?

What surprising facts do answers to the questions about progressive countries suggest to you?

The United Nations

Origin. Representatives of 50 nations met in San Francisco on April 25, 1945, to draw up a Charter for the international organization known as the United Nations. The war had not yet ended. Neither Germany nor Japan had surrendered. It was time, nevertheless, to get ready to win a permanent peace once the war was over. Winning the peace might prove as hard, it was thought, as winning the war. So far, this has proved to be

entirely true. The Charter was signed on June 26, 1945.

Several countries have joined the United Nations since the San Francisco Conference. The organization now has 82 members. There are three well-defined groups in the United Nations: (1) a western bloc led by the United States; (2) a communist bloc led by the Soviet Union; and (3) an Afro-Asia bloc.

Purposes. The United Nations has three main purposes.

First, the United Nations will promote peace and security among the nations of the world. Each country that has signed the Charter has pledged itself by so doing (a) to settle disputes peacefully, (b) to refrain from threatening or using force against another country, (c) to assist the United Nations in its undertakings, and (d) not to aid any country against which the United Nations may be acting.

Second, the United Nations will encourage friendly relations among nations. It will uphold the rule of equal rights among nations. It will not interfere in the "internal affairs" of a nation. Internal affairs are those affairs within a nation that do not threaten the peace of the world.

Third, the United Nations will promote human rights and fundamental freedoms. Fundamental freedoms include freedom of speech and freedom of religion. The organization will try to bring about cooperation in what are called economic, social, cultural, and humanitarian problems. This is a very broad purpose. Economic problems include the development of natural resources, the promotion of trade and industry—all the practical problems which peoples face in making a living. Social problems have to do with improving the relations of different national groups in world society. Cultural problems mean the improvement of education, art, literature, and science. Humanitarian problems involve the relief of suffering, the improvement of public health, and

such things. These four kinds of problems are not separated sharply from one another.

In order to accomplish these purposes, the Charter has provided for a General Assembly, a Security Council, an Economic and Social Council, a Trusteeship Council, and an International Court of Justice. The United Nations has its own staff of workers, directed by a Secretary-General. It also has various commissions and committees.

The General Assembly. The General Assembly consists of all members of the United Nations. Each member has one vote in the Assembly, but may send as many as five representatives to any of its meetings.

The General Assembly may discuss any subject mentioned in the Charter, and normally make recommendations concerning it to the Security Council. So any question of international interest, any dispute, any proposal for improving the lives of men or nations can be brought before the Assembly.

The Assembly has been called the "Town Meeting of the World." Its meetings are open to the public. Its proceedings are reported to the world by radio, by newspapers, and in other ways.

Regular sessions of the Assembly are held each year. Figure 262 shows a meeting of the General Assembly. Special sessions may also be held, if they are needed.

The Security Council. The Security Council is the executive branch of the United Nations. It has 11 members. Five members are permanent. They are the so-called Five Great Powers: the United States, Britain, France, Russia, and China. The other six members are elected by the General Assembly for two-year terms.

The Security Council is in continuous session. The Charter provides that any action taken by the Council must be agreed to by all five of the permanent members. Action by the Security Council has been made difficult because Russia has, more than 40 times, vetoed proposals agreed to by all the other



Figure 262. A session of the General Assembly

Courtesy of the United Nations

members of the Council. The chief duty of the Security Council is to see that disputes between nations are settled peacefully. If necessary, the Council may order military action against a nation that plans to start war.

The Security Council has two agencies to help it. One is the Military Staff Committee. This committee advises the Council on all military matters, and directs the armed force which the Council may use if necessary. The regular members of the Military Staff Committee are the Chiefs of Staff of the Five Great Powers. The other special agency of the Security Council is the Atomic Energy Commission. In 1946, it recommended a plan to prevent the use of atomic bombs. Russia re-

fused then and has since refused to accept it.

A session of the Security Council is shown in Figure 263. The ambassador of the United Kingdom is seated in the centre foreground.

The Economic and Social Council. This council has 18 members, elected by the General Assembly. Each year six members are to be elected for three-year terms. The duty of the Economic and Social Council is to study ways in which the living conditions of all peoples may be made better. It has several special organizations of experts to furnish information, make recommendations, and give other assistance. One of them is trying to promote the exchange of information and ideas throughout the world. Another is try-



Figure 263. The Security Council in session

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ing to secure better production and distribution of food. It plans, among other things, to move food into areas stricken by drought or flood, from areas having plentiful supplies.

The Trusteeship Council. This council deals with so-called "trust territories." Areas that do not govern themselves may come under the trusteeship system by agreement of the countries concerned. The Trusteeship Council looks after the welfare of the people in the trust territories.

The International Court of Justice. This is a court to which the nations of the world may take legal disputes for decision under international law. There are 15 judges, elected by the General Assembly and the Se-

curity Council for terms of nine years. The court hold its sessions at The Hague, in the Netherlands, not at the headquarters of the United Nations.

The headquarters of the United Nations. In December, 1946, the United Nations organization chose New York City as the place for its permanent home. New York was chosen because it has modern facilities of communication with every other country in the world. This is important. The greatest publicity is needed for the work of the United Nations if reason is to replace force in the world. Reason must rest on understanding. Sound opinion must be based on facts. The facts about the work of the United Nations



must always be made known promptly and everywhere. Nowhere else could they be reported so easily and widely as from New York.

The picture in Figure 264 shows the headquarters of the United Nations, along the bank of the East River. The tall building for the Secretariat has 38 stories, and the low building in the foreground is the Conference building. In the large, low building with the dome the General Assembly holds its meetings. Here in the heart of New York City the United Nations carries on its work.

Hope for the future. Most people everywhere expected much from the United Nations. Perhaps they expected too much. There have been serious quarrels and misunderstandings among the nations for centuries. It was not likely that they would be settled within a short time.

Peoples of every race and of every continent meet at the United Nations. Their backgrounds and traditions are varied. They speak many different languages. The problems that have come before the United Nations have been difficult. Sometimes the will to cooperate in seeking to solve problems has been lacking. Certainly it is only through patience, persistence, and determined good will that the United Nations can maintain peace and security among the nations, as hoped and expected.

In thinking about the United Nations one should remember that some of its special agencies unquestionably have accomplished great good. For instance, the United Nations International Children's Fund has in six years given aid of some kind to 70 million children and young adults in the fight against want and hunger and disease. In Korea, for example, it provided skim milk rations for 2,000,000 youngsters. In France, it aroused public interest in safe milk, and now milk is pasteurized by law in almost all of the country. It is trying to help children everywhere, and now has programs operating in 69 countries of the world.

Two lessons. The record of the United Nations and the course of world events teach us two lessons that we should not forget.

The first one is this: If there is to be a peaceful, better world, it must be a world of understanding. The many different peoples must learn much more about one another. They must abandon unreasonable prejudices. They must have respect for one another. They must be open-minded and fair-minded. They must not give reason for suspicion, but must strive to deserve confidence. They must not deny to others privileges which they claim for themselves. They must have patience, for a much better world cannot come quickly. They must *work* in every way for the better world they want. Otherwise, it will not come.

The second lesson is this: The interdependence of men everywhere makes the world *One World*. But this is not at all a uniform world. We have found many differences between countries and regions. There are differences in land and climate and resources. There are differences in people, their stage of advancement, and their ways of living. Variety, not uniformity, is the rule in Nature and in life.

People anywhere live under particular conditions of Nature. They cannot be understood apart from those conditions. Neither can they be understood apart from their historical background. They have received from past generations certain ideas and ideals, certain customs and habits, certain ways of looking at things and doing things. The past and the present and the future are linked together (p. 19).

People should always be free to live as they like, to be themselves, so long as they do not harm others. The common welfare of all peoples must govern the conduct of any people. The greatest need of the world today is lasting peace. To ensure lasting peace is the first and greatest aim of the United Nations.

Facts for Reference

The following information chiefly concerns various areas, populations, and distances in OLD WORLD LANDS. Selected facts about the Americas are included for comparison with facts about OLD WORLD LANDS. The figures represent the latest available statistics or estimates. The material has been gathered from various sources. The information about distances by air was received from Trans-Canada Airlines, Pan American World Airways, and Air-Age Education Research.

CONTINENTS

	AREA IN SQUARE MILES	POPULATION
Europe (Including European Russia)	3,850,000	544,500,000
Asia (Including Asiatic Russia)	17,035,000	1,722,500,000
Africa	11,635,000	223,500,000
Australia	2,974,581	9,766,000
North America (Including Mexico and Central America)	9,435,000	246,200,000
South America	6,853,659	131,000,000
Antarctica	5,379,817	

LANDS IN EUROPE

	AREA IN SQ. MI.	POPULATION	CAPITAL CITY	POPULATION OF CAPITAL
Albania	10,629	1,275,000	Tirana	50,000
Austria	32,388	6,933,905	Vienna	1,925,000
Belgium	11,775	8,798,055	Brussels	1,150,000
Britain	94,279	50,784,600	London	10,350,000
Bulgaria	42,796	7,629,254	Sofia	700,000
Czechoslovakia	49,330	13,296,243	Prague	1,025,000
Denmark	16,575	4,387,967	Copenhagen	1,225,000
Finland	130,160	4,065,027	Helsinki	480,000
France	212,659	42,774,000	Paris	6,675,000
Germany	136,548	71,349,500	Berlin	3,900,000
Greece	51,182	7,631,124	Athens	1,450,000
Hungary	35,911	9,204,799	Budapest	1,800,000
Ireland, Republic of	26,600	2,960,593	Dublin	640,000
Italy	116,235	48,560,000	Rome	1,751,000
Luxemburg	999	290,992	Luxemburg	70,000
Netherlands	15,764	10,550,737	Amsterdam	1,160,000
Norway	124,556	3,342,754	Oslo	535,000
Poland	121,131	27,423,000	Warsaw	1,025,000
Portugal	35,413	8,510,240	Lisbon	1,150,000
Rumania	91,671	17,489,794	Bucharest	1,500,000
Spain	194,232	28,039,112	Madrid	1,725,000
Sweden	173,394	7,290,112	Stockholm	1,045,000
Switzerland	15,944	4,950,000	Bern	205,000
Union of Soviet Socialist Republics (In Europe)	2,150,963	156,643,000	Moscow	7,100,000
Yugoslavia	99,050	16,990,000	Belgrade	520,000

LANDS IN ASIA

	AREA IN SQ. MI.	POPULATION	CAPITAL CITY	POPULATION OF CAPITAL
Afghanistan	250,000	12,000,000	Kabul	235,000
Bhutan	18,000	7,000,000	Punaka	7,900
Burma	261,000	19,045,000	Rangoon	750,000
Cambodia	67,308	5,040,000	Phompenh	500,000
Ceylon	25,332	8,098,637	Colombo	650,000
China	4,230,389	650,000,000	Peking	5,420,000

CITIES IN OLD WORLD LANDS WHICH HAVE A POPULATION OF 500,000 OR MORE

CITY	POPULATION
Ahmedabad, India	900,000
Alexandria, Egypt	1,100,000
Amsterdam, Netherlands	1,160,000
Antwerp, Belgium	640,000
Athens, Greece	1,450,000
Baghdad, Iraq	575,000
Baku, U.S.S.R.	925,000
Bangalore, India	875,000
Bangkok, Thailand	1,050,000
Barcelona, Spain	1,675,000
Berlin, Germany	3,900,000
Birmingham, England	2,440,000
Bombay, India	3,600,000
Brussels, Belgium	1,150,000
Bucharest, Rumania	1,500,000
Budapest, Hungary	1,800,000
Cairo, Egypt	3,050,000
Calcutta, India	4,150,000
Canton, China	1,700,000
Cape Town, Union, S. Africa	625,000
Casablanca, Morocco	775,000
Changchun, China	750,000
Chengtu, China	700,000
Chungking, China	1,620,000
Cologne, Germany	1,275,000
Copenhagen, Denmark	1,225,000
Dairen, China	900,000
Delhi, India	1,550,000
Dneipropetrovsk, U.S.S.R.	600,000
Dortmund, Germany	835,000
Dublin, Ireland	640,000
Dusseldorf, Germany	900,000
Essen, Germany	3,550,000
Frankfurt am Main, Germany	960,000
Genoa, Italy	735,000
Glasgow, Scotland	1,600,000

LANDS IN ASIA—Continued

	AREA IN SQ. MI.	POPULATION	CAPITAL CITY	POPULATION OF CAPITAL
India (Excluding Kashmir).....	1,056,556	392,400,000	New Delhi.....	325,000
Indonesia.....	735,267	82,000,000	Jakarta.....	1,825,000
Iran.....	628,000	19,139,563	Teheran.....	1,450,000
Iraq.....	116,600	6,538,109	Baghdad.....	575,000
Israel.....	8,048	1,872,390	Jerusalem.....	200,000
Japan.....	146,690	89,275,529	Tokyo.....	6,825,000
Jordan.....	37,700	1,329,174	Amman.....	202,000
Korea.....	85,246	30,000,000	{Seoul.....	1,600,000
			{Pyongyang.....	500,000
Laos.....	91,154	1,450,000	Vientiane.....	80,000
Lebanon.....	3,474	1,303,940	Beirut.....	250,000
Malaya.....	50,690	6,276,915	Kuala Lumpur..	300,000
Mongolia.....	580,158	900,000	Ulan Bator.....	100,000
Nepal.....	54,000	8,475,000	Katmandu.....	400,000
Pakistan.....	364,737	75,842,165	Karachi.....	1,200,000
Philippines.....	115,600	21,650,000	Manila.....	1,700,000
Saudi Arabia.....	714,500	7,000,000	{Riyadh.....	150,000
			{Mecca.....	150,000
Singapore.....	225	1,189,000	Singapore.....	1,150,000
Syria.....	72,560	3,655,904	Damascus.....	400,000
Thailand.....	198,272	20,125,000	Bangkok.....	1,050,000
Turkey.....	296,185	19,308,441	Ankara.....	465,000
Union of Soviet Socialist Republics (In Asia).....	6,499,106	43,558,000	Moscow.....	7,100,000
Viet-Nam.....	126,769	26,300,000	{Hanoi.....	500,000
			{Saigon.....	1,800,000
Yemen.....	75,000	5,000,000	San'a.....	50,000

LANDS IN AFRICA

	AREA IN			POPULATION
	SQ. MI.	POPULATION	CAPITAL CITY	OF CAPITAL
Algeria.....	851,298	9,390,000	Algiers.....	615,000
Angola.....	481,351	4,260,000	Luanda.....	164,000
Bechuanaland.....	275,000	293,000	Mafeking.....	9,000
Belgian Congo.....	904,757	12,300,000	Leopoldville....	258,000
British Somaliland....	68,000	640,000	Hargeisa.....	45,000
Cameroons.....	166,489	3,200,000	Yaoundé.....	50,000
Egypt.....	386,198	22,221,000	Cairo.....	3,050,000
Ethiopia.....	395,754	18,000,000	Addis Ababa....	400,000
French Equatorial				
Africa.....	969,112	4,560,000	Brazzaville.....	84,000
French Somaliland....	9,071	66,000	Djibouti.....	22,000
French West Africa... 1,805,210	18,100,000	Dakar.....	240,000	
Gambia.....	4,074	264,000	Bathurst.....	15,000
Ghana.....	91,843	4,576,000	Accra.....	208,000
Kenya.....	224,960	6,000,000	Nairobi.....	221,700
Liberia.....	43,000	1,250,000	Monrovia.....	40,000
Libya.....	679,358	1,100,000	Tripoli.....	172,000
Madagascar.....	231,250	4,550,000	Tananarive.....	194,000
Morocco.....	153,870	9,602,000	Rabat.....	225,000
Mozambique.....	929,731	6,000,000	Lourenço	
			Marques.....	94,000
Nigeria.....	372,674	31,970,000	Lagos.....	310,000
Rhodesia & Nyasaland	290,320	6,970,000	Salisbury.....	187,000
Rio de Oro.....	73,362	50,000	Villa Cisneros... 5,000	
Sierra Leone.....	27,925	2,050,000	Freetown.....	100,000
Somalia.....	150,333	1,270,000	Magadiscio.....	60,000
South West Africa.... 317,725	452,000	Windhoek.....	20,598	
Sudan.....	967,500	8,950,000	Khartum.....	270,000
Tanganyika.....	362,688	8,250,000	Dar es Salaam... 129,000	
Tunisia.....	48,332	3,735,000	Tunis.....	450,000
Uganda.....	98,981	5,450,000	Entebbe.....	8,500
Union of South Africa. 472,550	13,510,000	{Cape Town.....	625,000	
		{Pretoria.....	300,000	
Zanzibar.....	1,020	276,000	Zanzibar.....	46,000

CITY	POPULATION
Gorki, U.S.S.R.....	1,100,000
Hamburg, Germany.....	1,950,000
Hankow, China.....	1,600,000
Harbin, China.....	1,200,000
Hyderabad, India.....	1,250,000
Istanbul, Turkey.....	1,250,000
Jakarta, Indonesia.....	1,825,000
Johannesburg, Union South Africa.....	1,250,000
Kanpur, India.....	800,000
Karachi, Pakistan.....	1,200,000
Kharkov, U.S.S.R.....	900,000
Kiev, U.S.S.R.....	1,000,000
Kobe, Japan.....	950,000
Kowloon, Hong Kong.....	975,000
Kyoto, Japan.....	1,350,000
Lahore, Pakistan.....	925,000
Leeds, England.....	1,100,000
Leipzig, Germany.....	810,000
Leningrad, U.S.S.R.....	3,600,000
Lisbon, Portugal.....	1,150,000
Liverpool, England.....	1,460,000
Lodz, Poland.....	720,000
London, England.....	10,350,000
Madras, India.....	1,650,000
Madrid, Spain.....	1,725,000
Manchester, England.....	1,970,000
Manila, Philippines.....	1,700,000
Marseille, France.....	730,000
Melbourne, Australia.....	1,550,000
Milan, Italy.....	1,640,000
Moscow, U.S.S.R.....	7,100,000
Mukden, China.....	2,250,000
Munich, Germany.....	1,100,000
Nagoya, Japan.....	1,350,000
Nanking, China.....	1,200,000
Naples, Italy.....	1,275,000
Odessa, U.S.S.R.....	600,000
Osaka, Japan.....	2,450,000
Palermo, Italy.....	504,000
Paris, France.....	6,675,000
Peking, China.....	5,420,000
Prague, Czechoslovakia.....	1,025,000
Rangoon, Burma.....	750,000
Rome, Italy.....	1,751,000
Rostov, U.S.S.R.....	600,000
Rotterdam, Netherlands.....	930,000
Saigon, Viet-Nam.....	1,800,000
Seoul, Korea.....	1,600,000
Shanghai, China.....	7,100,000
Sheffield, England.....	513,000
Sian, China.....	1,500,000
Singapore, Singapore.....	1,150,000
Stockholm, Sweden.....	1,045,000
Sydney, Australia.....	1,900,000
Taipei, Formosa.....	600,000
Tashkent, U.S.S.R.....	775,000
Tiflis, U.S.S.R.....	4,000,000
Teheran, Iran.....	1,450,000
The Hague, Netherlands.....	700,000
Tientsin, China.....	2,690,000
Tokyo, Japan.....	6,825,000
Tsinan, China.....	700,000
Tsingtao, China.....	850,000
Turin, Italy.....	910,000
Valencia, Spain.....	517,000
Victoria, Hong Kong.....	975,000
Vienna, Austria.....	1,925,000
Warsaw, Poland.....	1,025,000
Yokohama, Japan.....	1,100,000

AUSTRALIA AND NEW ZEALAND

	AREA IN SQ. MI.	POPULATION	CAPITAL CITY	POPULATION OF CAPITAL
Australia.....	2,947,581	9,138,000	Canberra.....	36,653
New Zealand.....	103,416	2,122,000	Wellington.....	140,000

LANDS IN NORTH AMERICA

	AREA IN SQ. MI.	POPULATION	CAPITAL CITY	POPULATION OF CAPITAL
Canada.....	3,845,144	16,080,791	Ottawa.....	226,002
The United States....	3,022,387	179,000,000	Washington.....	1,850,000
Greenland.....	837,620	25,000	Godthaab.....	588
Alaska.....	586,378	210,000	Juneau.....	5,956

LANDS IN MIDDLE AMERICA

	AREA IN SQ. MI.	POPULATION	CAPITAL CITY	POPULATION OF CAPITAL
British Honduras.....	8,867	78,000	Belize.....	21,886
Costa Rica.....	19,238	933,000	San José.....	127,979
Cuba.....	44,206	5,980,000	Havana.....	1,540,829
Dominican Republic..	18,711	2,325,000	Ciudad Trujillo..	261,085
El Salvador.....	8,169	2,158,000	San Salvador....	203,796
Guatemala.....	42,042	3,201,000	Guatemala City..	293,998
Haiti.....	10,714	3,300,000	Port au Prince...	200,000
Honduras.....	44,482	1,630,000	Tegucigalpa....	92,951
Jamaica.....	4,411	1,552,000	Kingston.....	158,702
Mexico.....	760,375	29,250,000	Mexico.....	3,700,000
Nicaragua.....	57,143	1,224,000	Managua.....	176,569
Panama.....	28,575	897,000	Panama City....	127,874
Puerto Rico.....	3,423	2,238,000	San Juan.....	224,767

LANDS IN SOUTH AMERICA

	AREA IN SQ. MI.	POPULATION	CAPITAL CITY	POPULATION OF CAPITAL
Argentina.....	1,079,965	19,292,000	Buenos Aires....	5,850,000
Bolivia.....	404,388	3,200,000	La Paz.....	340,000
Brazil.....	3,286,170	57,800,000	Rio de Janeiro...	3,625,000
British Guiana.....	89,480	495,000	Georgetown.....	120,000
Chile.....	286,323	6,510,000	Santiago.....	1,640,000
Colombia.....	439,714	12,525,000	Bogotá.....	760,000
Ecuador.....	106,178	3,622,000	Quito.....	225,000
French Guiana.....	34,740	28,537	Cayenne.....	13,346
Paraguay.....	157,039	1,550,000	Asunción.....	210,000
Peru.....	428,258	9,300,000	Lima.....	1,100,000
Surinam(Dutch Guiana)	54,291	250,000	Paramaribo.....	100,000
Uruguay.....	72,172	2,575,000	Montevideo....	850,000
Venezuela.....	352,143	5,750,000	Caracas.....	625,000

LARGEST CITIES IN THE AMERICAS

CITIES IN CANADA WHICH HAVE A POPULATION OF MORE THAN 100,000

CITY	POPULATION
Calgary, Alberta.....	181,780
Edmonton, Alberta.....	226,002
Hamilton, Ontario.....	239,625
Montreal, Quebec.....	1,070,000
Ottawa, Ontario.....	222,129
Quebec, Quebec.....	170,703
Toronto, Ontario.....	667,706
Vancouver, British Columbia..	360,000
Windsor, Ontario.....	121,980
Winnipeg, Manitoba.....	255,093

CITIES IN THE UNITED STATES WHICH HAVE A POPULATION OF 500,000 OR MORE

CITY	POPULATION
Baltimore, Md.....	1,475,000
Boston, Mass.....	2,550,000
Buffalo, N. Y.....	960,000
Chicago, Ill.....	5,725,000
Cincinnati, Ohio.....	1,011,000
Cleveland, Ohio.....	1,630,000
Detroit, Mich.....	3,675,000
Houston, Texas.....	1,000,000
Los Angeles, Calif.....	5,025,000
Milwaukee, Wis.....	1,020,000
Minneapolis, Minn.....	540,000
New Orleans, La.....	785,000
New York, N. Y.....	14,300,000
Philadelphia, Pa.....	3,550,000
Pittsburgh, Pa.....	1,515,000
St. Louis, Mo.....	1,695,000
San Francisco, Calif.....	790,000
Washington, D. C.....	1,850,000

CITIES IN LATIN AMERICA WHICH HAVE A POPULATION OF 500,000 OR MORE

CITY	POPULATION
Bogotá, Colombia.....	760,000
Buenos Aires, Argentina.....	5,850,000
Havana, Cuba.....	1,540,000
Lima, Peru.....	1,100,000
Mexico, Mexico.....	3,700,000
Montevideo, Uruguay.....	850,000
Recife, Brazil.....	600,000
Rio de Janeiro, Brazil.....	3,625,000
Rosario, Argentina.....	761,300
Santiago, Chile.....	1,640,000
São Paulo, Brazil.....	3,325,000

SELECTED FACTS ABOUT CANADA

	AREA IN SQ. MI.	POPULATION	CAPITAL	POPULATION OF CAPITAL
CANADA.....	3,845,144	16,080,791	Ottawa.....	222,129
Alberta.....	255,285	1,123,116	Edmonton.....	226,002
British Columbia.....	366,255	1,398,464	Victoria.....	54,584
Manitoba.....	246,512	850,040	Winnipeg.....	255,093
New Brunswick.....	27,985	554,616	Fredericton.....	18,303
Nova Scotia.....	21,068	694,717	Halifax.....	93,301
Ontario.....	412,582	5,404,933	Toronto.....	667,706
Prince Edward Island.....	2,184	99,285	Charlottetown.....	16,707
Quebec.....	594,860	4,628,378	Quebec.....	170,703
Saskatchewan.....	251,700	880,665	Regina.....	89,755
Northwest Territories.....	1,304,903	19,313		
Yukon.....	207,076	12,190		
Newfoundland and Labrador.....	154,734	415,074	St John's.....	57,078

DISTANCES BY SEA AND BY AIR

In the following tables of distances by sea and by air, all of the figures represent *statute* miles. Statute miles are ordinarily used in measuring distances by land. Sea distances usually are measured in *nautical* miles. It is difficult, however, to compare statute miles and nautical miles, because a nautical mile is a little longer than a statute mile. In these tables, distances by sea and by air may be compared easily, since reference is made to the same kind of mile, in both tables.

DISTANCES BY SEA

	STATUTE MILES
London to New York.....	3,847
London to Leningrad.....	1,783
London to Cape Town.....	6,923
Cape Town to Buenos Aires.....	4,345
Cape Town to New York.....	7,814
Cape Town to Colombo.....	5,070
Liverpool to Colombo via Suez Canal.....	7,717
Colombo to Singapore.....	1,825
Singapore to Shanghai.....	2,525
Singapore to Yokohama.....	3,345
Singapore to Melbourne.....	4,396
Liverpool to Halifax.....	2,891
Halifax to New York.....	686
New York to Buenos Aires.....	6,752
Halifax to Hamburg.....	3,480
Vancouver to Valparaíso.....	6,893
Valparaíso to Melbourne.....	7,222
Valparaíso to Wellington.....	5,799
Wellington to Colombo.....	7,058

DISTANCES BY AIR

	STATUTE MILES
Toronto to Montreal.....	337
Montreal to Mexico City.....	2,315
Montreal to Buenos Aires.....	5,620
Montreal to London.....	3,264
London to Paris.....	213
London to Berlin.....	574
London to Rome.....	895
London to Moscow.....	1,549
London to Calcutta.....	4,954
London to Tokyo.....	5,938
London to Cape Town.....	6,005
London to Darwin.....	8,598
London to Wellington.....	11,682
Paris to Berlin.....	542
Paris to Moscow.....	1,541
Paris to Lisbon.....	898
Halifax to Vancouver.....	3,035
Vancouver to Los Angeles.....	1,099
Los Angeles to Buenos Aires.....	6,118
Buenos Aires to Cape Town.....	4,270
Buenos Aires to Santiago.....	701
Santiago to Wellington.....	5,785

INDEX

KEY TO PRONUNCIATION

The letters in the lists below are marked to show their sounds. These marks will help you to pronounce correctly the words in this Index.

ā as in āble	ĕ as in ĕnd	ō as in ōdd	ū as in cūbe	κ as ch in the Ger-
ă as in ädd	ē as in makēr	ô as in ôr	û as in ūp	man word ich
â as in câre	ê as in ĕvent	ô as in ôbey	û as in būrn	n as in the French
ä as in ärm	ē as in hēre	ô as in sôft	û as in ūnite	word bon
â as in âsk	ē as in nickĕl	ô as in cōnnect	û as in menû	th as in then
â as in vâcation	ī as in ĭce	ōō as in fōod	ÿ as in circÿs	th as in thin
â as in sofâ	ī as in ĭll	ôô as in fōot	ch as in chair	tÿ as in natÿre
ă as in giănt	ī as in anĭmal	oi as in oil	g as in go	y as in yonder
ē as in ĕve	ō as in ôld	ou as in out		zh as the z in azure

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